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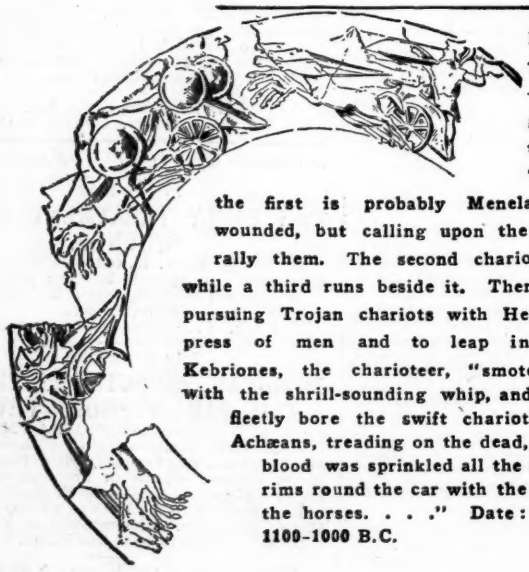

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Observations
ON
THE SEVERE ANAEMIAS OF PREGNANCY AND THE POST-PARTUM STATE.

BY

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REGIUS PROFESSOR OF MEDICINE, OXFORD.

THOSE of us whose professional careers coincide with its modern study will remember how important was the part played by these conditions in severe anaemia. Channing (1842), Lebert (1853), and Gusserow (1871) dealt with this aspect of the subject. Many of Biermer's original cases were in pregnant women, and a large proportion of the cases forming the basis of the monographs of Müller (1877) and of Eichhorst (1878) were in this class. After 1885 the literature shows a striking reduction in the references, and Ehrlich and Lazarus, in Nothnagel's *System*, suggested that local influences in the cantons were responsible for the frequency of this association in the cases reported by the Swiss clinicians. So experienced a teacher as Ahlfeld, they state, had never met with a case. Considering how much has been written by British physicians on the various forms the literature on the anaemia of pregnancy and the post-partum state is very scanty—only one of nineteen in the *Index Catalogue* of the Surgeon-General's Library, both series. In Allbutt and Rolleston's *System* French makes only a passing remark on the association. With few exceptions the textbooks in obstetrics have very little to say, and the gloomy prognosis is an echo of the unfortunate experiences of the older writers. Among recent works Edgar's has the best section. That cases are rare in this country is shown by the absence of reference in the writings of so experienced workers as Byrom Bramwell and William Hunter. In the United States Channing's really remarkable study seems to have aroused an interest in the subject, and five American papers are quoted in Vol. I of the *Index Catalogue* before the appearance of Gusserow's in 1871. In Cabot's[1] series of 1,200 cases of progressive pernicious anaemia, in 35 the disease began during pregnancy or shortly after parturition, 18 during the former. This proportion—about one in thirty-five—is probably the average for the United States. Davis,[2] in reporting a case, gives a very good summary of the older American literature; and Findley,[3] who deals with the subject more recently, concludes that "in all well established cases the disease has proved fatal." In the discussion on this paper Richard Norris stated that there had only been one case among three thousand women at the Preston Retreat. Of the first twenty-three cases of "progressive pernicious" anaemia of which I have notes, all but one seen in Montreal, five were *post partum*. I saw two in Philadelphia, and there were a few at my Johns Hopkins clinic, but I have not the figures. The theses of Decroix,[4] Husson,[5] and Robert[6] indicate that the association is not very common in France. The recent German and Swiss literature is given in Naegli's well known monograph on the blood. Possibly the existing conditions of underfeeding, etc., have led to an increase of cases during pregnancy, and the intense wave of streptococcus infection may have increased the cases of acute septic anaemia *post partum*.

The cases may be divided into four groups:

I. ANAEMIA FROM POST PARTUM HAEMORRHAGE.

(*a*) The bleeding may be profuse and rapidly fatal. The physician sees fatal haemorrhage in aneurysm, in typhoid fever, in peptic ulcer, and in ruptured oesophageal varix, none of which conditions present the tragedy of the *post-partum* case. Only once has it been my misfortune to witness this peculiarly pathetic accident. Peace and quiet reign in the lying-in chamber and happiness in the household, for all has gone well, and the young mother is just beginning to realize the joy that "a child is born into the world." The doctor may have left, feeling safe and satisfied. The attention of the nurse is attracted by a sudden restlessness of her patient, whose face shows a beginning pallor, and she finds the dressings soaked with blood. Very soon the symptoms are those of acute anaemia—a rapid, jerky pulse, extreme restlessness, yawning, sweating, sighing respiration, increasing pallor, and with muscular twitchings, convulsions, or a sudden collapse all is over. This was what I saw one afternoon, called hurriedly to the house of a neighbour—a strong, healthy young woman *in articulo mortis*, after a normal delivery, as bloodless as if the carotids had been cut. No wonder that novelists have made such a tragedy the climax of a story. Hitchins, in *The Fruitful Vine*,[7] makes Dolores die in this way; and it is possible that Walter Savage Landor had in mind this type of death in his beautiful little poem in *Pericles and Aspasia*:

> Artemidora! God's invisible,
> While thou art lying faint along the couch,
> Have tied the sandal to thy veined feet;
> And stand beside thee, ready to convey
> Thy weary steps where other rivers flow
>
> * * * * *
>
> Fate's shears were over her dark hair unseen
> While thus Elpenor spoke.

(*b*) *The Anaemia Following Repeated Small Haemorrhages.*—This not infrequently follows abortion, more rarely the repeated bleeding after a delivery at term. The following is a good illustrative case:

Mrs. B., aged 45; admitted October 8th, 1918, having had an abortion in the fourth month of her seventh pregnancy, one month previously. She had been losing blood intermittingly, not any large amount, but every few days a clot or two would come away. There had been slight irregular fever, and a progressive anaemia. At times there was a slight purulent discharge. She was curetted, and with douches the discharges soon ceased. She looked profoundly anaemic, and with a sallow brown tint of the skin. The blood count was: Red blood corpuscles 2,106,000 per c.mm.; leucocytes 12,800. Ten days later the red blood count was 1,800,000 and the leucocytes 12,000. On the 21st thrombosis of the left femoral vein with swelling of the leg. The blood films showed the red cells irregular in shape and size, many normoblasts, and numerous platelets. In the open air with plenty of good food, iron and arsenic, she improved rapidly, and left the infirmary on December 3rd with a nearly normal blood count.

As in many cases, the anaemia here was due to a combination of repeated small haemorrhages and a mild sepsis. The general appearance was that of an ordinary Addisonian anaemia, for which any casual observer would have mistaken the case. In III and IV of my Montreal series the profound anaemia followed many small haemorrhages after abortion.

II. THE SEVERE ANAEMIA OF PREGNANCY.

The blood of the pregnant woman shows in the early months a diminution of red corpuscles, a low haemoglobin, and a slight leucocytosis (as is well shown in the composite chart in W. L. Thompson's[8] study from Williams's clinic), to be followed by a rise to or near normal in the ninth month. A slight pallor in the early months is common, and is often associated with the morning vomiting or dyspepsia. That this so-called chloro-anaemia of pregnancy might pass on to a grave and fatal form was recognized by Channing and Lebert, but it was the full report by Gusserow[9] of five fatal cases that roused the attention of the profession to the seriousness of severe anaemia in pregnancy. The following is a typical case:

On April 13th, 1917, I saw with Dr. Arthur F. Stabb and her husband Mrs. A., the wife of an army surgeon, a primipara of good previous health, though she had had a "tendency to anaemia." The pregnancy, which began in September, 1916, was uneventful until March, when anaemia began and increased rapidly, so that by April 1st she had dyspnoea and swelling of the feet. On April 3rd albumin appeared in the urine in large amounts. On April 10th the blood count was: Red blood corpuscles 864,000 per c.mm.; leucocytes 13,360; haemoglobin 20; colour index 1.12. The lymphocytes were increased 30 per cent., and the normoblasts were 6 per 100 leucocytes. There was the usual extreme irregularity in size and shape of the red cells. Labour began on the 9th, and on the 11th she was delivered of a stillborn child of normal appearance for the seventh month. There was very little haemorrhage, and she stood the strain very well. When seen on the 13th she was well nourished, but with all the objective features of profound anaemia. There were no internal haemorrhages. The case was regarded as a typical example of the so-called toxic or haemolytic anaemia of pregnancy, and, based on an unusually fortunate experience, I ventured to give a favourable prognosis. The recovery was rapid and uninterrupted, as the blood counts show: April 18th, red blood corpuscles 1,036,000; April 26th, 2,368,000; May 3rd, 2,592,000; June 17th, 3,250,000; and December 4th, a practically normal count. The leucocytes rose on April 18th to 45,000 per c.mm., and fell to 3,360 on May 3rd. On April 26th the normoblasts rose to 16 per 100 leucocytes, after which date they disappeared.

III. POST-PARTUM ANAEMIA.

In this, the common form, after a normal delivery without excessive loss of blood, the patient begins to get pale, and within a few weeks the blood count may fall below 2,000,000 per c.mm., and the anaemia may progress and prove fatal in from eight to twelve weeks. How serious this type may be is seen from the high mortality in the series of Channing and of the Zurich clinicians. On the other hand, the experience elsewhere has been more favourable. Dr. Palmer Howard, one of the earliest and most careful students of the subject, insisted that the large percentage of recoveries in the *post-partum* cases, and the absence of recurrence distinguished this form from the true Addisonian anaemia, though clinically the cases appear to be identical. The five *post-partum* cases in my first series all recovered. One was alive more than thirty years after and had passed through two subsequent pregnancies without trouble. The following case gives a good picture of the disease:

Amelia T., aged 35; admitted February 2nd, 1888. In the October previous she had been delivered of her fourth child; no complications. She had begun to nurse the baby, but gradually got pale and weak and had frequent fainting fits and much shortness of breath. On admission the anaemia was so extreme that she could not sit up in bed without feeling faint. The red blood corpuscles were 1,170,000 per c.mm., with extreme irregularity in form and size and many nucleated red cells. The haemoglobin was 15 to 18 per cent. With rest in bed, good food, iron and arsenic, she improved rapidly and left the hospital with a normal blood count.

Not infrequently in severe anaemia there is a continuous fever, which may lead to error in diagnosis, even suggesting typhoid fever, a point to which Cabot refers. The fever may be more irregular, and even associated with chills, which in the following case led to the diagnosis of malaria.

L. T., primipara, aged 24, seen with Dr. Jenkins, October 6th, 1898. Though a difficult labour there were no complications, and for ten days everything was normal. Then she began to get pale and grew rapidly worse, and in the sixth week after confinement, when I saw her, the red blood cell count was 1,200,000 per c.mm., leucocytes 15,000, haemoglobin 15 per cent. Every fourth or fifth day the patient had a chill in which the temperature rose to 103–104°, after which she sweated profusely. There was no discharge, no evidence of sepsis, other than the fever and the chills. The spleen enlarged, and as she lived in a region in which parturition was recognized as one of the factors determining recurrence of malaria this had been suggested in explanation of the chills. The blood was negative during a chill and after. The red cell count fell to 800,000 per c.mm. and her condition for weeks was critical, but she gradually improved, and four months later she had a nearly normal blood count.

IV. THE ACUTE ANAEMIA OF POST-PARTUM SEPSIS.

In certain types of sepsis there is rapid blood destruction. In acute endocarditis the anaemia with a large spleen may completely mask the clinical picture, as in cases which I reported a few years ago in the *Interstate Medical Journal* (1913). In no condition do we see such rapid haemolysis as in *post-partum* sepsis—a form of anaemia not sufficiently recognized or studied.

In 1882 I saw with Dr. Alloway, on the seventh day after delivery, a young woman in a state of profound anaemia. The blood loss had not been severe, but for some days there had been an unusually foul though slight discharge. The red blood cells were just 1,000,000 per c.mm., the leucocytes 20,000. I never saw the objective features of anaemia more pronounced, and her chief complaint was the painful throbbing of the abdominal aorta, which pulsated with extraordinary violence. She died on the twelfth day. There was "diphtheritic" endometritis, septic thrombi in the pelvic veins; no endocarditis.

Such extremely rapid cases are not common, but Cabot[10] refers to one with identical features, in which the acute sepsis was not suspected. The red blood count was 800,000 per c.mm. "Diphtheritic" endometritis was found at the *post-mortem* examination, without which, as Cabot remarks, the case would have gone into the category of puerperal pernicious anaemia. While every patient with puerperal fever has some grade of anaemia, only in a few does the blood loss dominate the picture. In many of the best textbooks on obstetrics—for example, Edgar (1903)—the condition is not referred to. An excellent account is given by Lea,[11] who states that the loss of red cells may be at the rate of from 200,000 to 1,000,000 per c.mm. a week, and that the count may fall to 300,000 per c.mm. Three cases of puerperal sepsis recently in the Radcliffe Infirmary illustrate the condition very well.

Mrs. C., aged 24, admitted under Colonel Collier August 31st, 1918, had a miscarriage late in her second pregnancy. Fragments of retained placenta were removed. She had the typical sallow, pale yellow (not the brown-yellow) tint of skin, and the usual features of moderate anaemia. The red blood cells were 2,700,000 per c.mm., leucocytes 8,600, haemoglobin 46. She improved rapidly, and left the infirmary on September 21st, 1918.

Mrs. M., aged 49, admitted August 8th, 1918, under Colonel Brooks. Since the delivery of her eleventh child, July 16th, she had had severe sepsis with high irregular fever and a progressive anaemia. The blood cultures were negative. The blood count was: Red blood cells 1,580,000 per c.mm., leucocytes 13,400, haemoglobin 16 per cent., colour index 48. Nothing special in the differential count other than a high percentage of lymphocytes. The irregularity in size and shape of the red cells was extreme, and there were many normoblasts. She died on September 8th in a state of profound anaemia.*

Mrs. W., aged 31, primipara, admitted under Colonel Collier, November 30th, 1918, having been delivered a week before. No complications. Acute sepsis developed with high fever and a very offensive discharge. When admitted the patient was very anaemic, with a sallow, sub-icteroid tint and all the symptoms of a severe infection. Streptococci were isolated from the blood, and she was given antistreptococcic serum on December 1st and 3rd. The red blood count was 2,250,000 per c.mm., leucocytes 9,600, haemoglobin 40. The differential count showed nothing special; normoblasts were present in moderate numbers. The anaemia progressed rapidly, the fever remained high, and she died on December 7th.

With an increased frequency of streptococcus infections and an unusual virulence of at least some strains in respiratory affections, it would be interesting to learn if puerperal fever has been more prevalent throughout the country. So far as I know, the *post-partum* sepsis cases have not shown a special tendency to haemorrhage, as have so many of the streptococcic infections of the past six months.

REMARKS.

To the nature of the haemolytic agent in the pregnancy and *post-partum* cases there is as yet no clue, any more

* There may have been septic endocarditis in this case, as a few days before death there was a soft diastolic murmur along the left sternal border. The dancing, vibrating pulsation of the peripheral arteries was extreme and the pistol-shot sound unusually loud. In connexion with the production of this in the arteries, about which so much has been written recently, the following note, dictated September 2nd, 1918, is of interest: "A loud systolic bruit is heard over the abdominal aorta without pressure; but neither heart sound. Over the femoral, without the slightest pressure, two sounds are heard, quality and intensity about equal, and almost as loud as the sounds heard over the heart itself. With pressure both increase in intensity, then a loud systolic murmur develops, and on pressure to obliteration, a loud single pistol shot remains."

than we have to the cause of that most baffling of all blood diseases, Addison's anaemia. The progress and the blood picture suggest the haemolytic type, which can be produced experimentally and which is caused by the poisons of the *Bothriocephalus*. In the profoundly changed metabolism of pregnancy and in the intensely katabolic metabolism of the *post-partum* states we assume the production of haemolytic agents—toxins—but, as French remarks, "the use of the word toxin almost connotes ignorance." Though progressive and often pernicious, the anaemia is caused by an agent which differs in one all-important particular from that which causes the anaemia of Addison. When recovery takes place it is permanent, and the woman may escape in subsequent pregnancies. The second patient in my series (whom I knew well) had an attack of extreme gravity, recovered, bore two children subsequently and was alive thirty years after the attack. Recovery from the Addisonian form may last ten, fifteen, or even seventeen (McPhedran) years, but such instances are exceptional, and in the cases of reported permanent recovery there is always the question of mistaken diagnosis.

The blood picture may be of value in estimating the outlook. Signs of active regeneration may be present, as in Mrs. A.'s case, indicated by blood crises and a large proportion of red cells with signs of recent formation, and the basophilic granulation described by Boggs and Morris and by Milne, the mitochondria (Sappington) and the reticulation described by Robertson and Bock [12] The number may rise from 1 per cent., the normal, to 20 or 25 per cent. with marked bone-marrow stimulation. A high colour index is the rule in the pregnancy and *post-partum* cases. The blood condition is uncertain, however, as well shown in two exceptionally well studied cases in Meyer's clinic, reported by Jungermann,[13] in which the contrast was striking, the one with low colour index and features of an aplastic anaemia, the other the characteristic Addisonian picture. Both were pregnancy cases, and both had normal deliveries and recovered completely. The absence of platelets is a feature of the common idiopathic anaemia, contrasting, in this respect, with the post-haemorrhagic and septic forms. In the hands of skilful students the criteria offered by the blood examination should, as a rule, be of great value in the prognosis.

My individual experience is exceptional and much more hopeful than indicated in the literature, and particularly in works on obstetrics. The seven cases seen in Montreal and Philadelphia recovered. I have not at hand our large material from the Johns Hopkins Hospital; but I do not remember a fatal pregnancy or *post-partum* case. The later appear to be the more fatal, and the cases reported by Elder and Mathews [14] show that a fatal termination may follow in spite of the most careful treatment.

Acute haemorrhage *post partum* may be rapidly fatal from reduction in blood volume; very large amounts may be lost extending over several days, and yet recovery takes place.

The report of Robertson and Bock, just mentioned, contains much information of value in estimating the blood loss in haemorrhage and the means of treatment. From what is recorded, and from personal experience, I should say the danger of a grave anaemia progressive in character is not great after a fairly profuse haemorrhage. Once the bleeding stops, recovery is progressive and often surprisingly rapid. On the other hand, repeated small losses of blood after abortion or a normal delivery may be followed by an anaemia out of all proportion to the quantity of blood lost. The starting point, indeed, of a few cases of Addison's anaemia appears to be repeated epistaxis or bleeding piles.

The treatment of the cases is that of the severer forms—fresh air, rest, food, iron, and arsenic (in which I still have faith); and if the blood count is very low, 20 per cent. of corpuscles and haemoglobin, transfusion may be employed. The newer technique has many advantages, but the results do not, in Addison's anaemia at any rate, appear to be more favourable than those we had with the old Aveling or Roussel apparatus.

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Observations
ON
INFLUENZA AND ITS COMPLICATIONS.

BY
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THE following observations were made during a severe epidemic of influenza amongst patients of the 3rd and 4th Scottish General Hospitals a few weeks ago. The majority of cases were amongst American troops, and most of the patients were ill on arrival at Glasgow by transport. Others were amongst British troops, and there was no essential difference between the two groups of cases except that pneumonia was more frequent amongst the former. At the outset we were struck by the prevalence of mixed infections, as has been found by various observers elsewhere, and we have endeavoured to trace the part played by the various organisms concerned, as regards both the complications which occurred and the manner in which a fatal result took place. The facts recorded refer chiefly to the results of *post-mortem* examinations, and we bring them forward, as it is desirable to have as many records as possible of the features of the epidemic in different localities. To speak generally, we may say that the symptoms were essentially those of severe influenza, with a preponderance of pulmonary affections, which may be roughly classified under the headings of bronchitis attended with marked irritation, bronchopneumonia, and lobar pneumonia. Amongst the pneumonia cases the mortality was very high.

The epidemic was essentially associated with the presence of the *Bacillus influenzae* (Pfeiffer). Owing to lack of sufficient time at our disposal we were unable to undertake so extensive an examination of sputa as we would have wished, but the organism could usually be found without difficulty, and was often present in enormous numbers. In a small proportion of cases it could not be found, but with regard to these latter it must be recognized that, whilst the microscopic picture is often characteristic, the identification of the organism by microscopic means, when it is scanty, is impossible; and, of course, it is in such cases that the isolation by culture is attended by special difficulty. In over a dozen cases where the organism was present in considerable numbers it was cultivated from the sputum without difficulty, and in many instances the number of colonies obtained exceeded those of other organisms. Cultures were obtained also at *post-mortem* examinations from the bronchial mucosa, the pneumonic patches, abscesses, etc.; in fact, from all the lesions with which it was found associated. The characters of the bacilli isolated agreed in all essentials with those described by Pfeiffer and recently by C. J. Martin, and it is accordingly unnecessary to say anything under this heading. Blood cultures were made in fifteen severe cases, but with negative result in all as regards the influenza bacillus. In five of these cases pure cultures of the pneumococcus were obtained, to which further reference is made below.

The medium which we used throughout was a mixture of defibrinated human blood and trypagar, in the proportion of about one to eight; and we have not yet made any systematic examination of other media recommended. The agar being melted, and its temperature being brought to 55° C., the blood is added and mixed, and the mixture is poured into small Petri dishes. For inoculation, a drop or two of bouillon or sterile saline solution is placed on the surface of the medium. This is inoculated from the sputum or other material, and then spread over the surface in the usual way with a bent glass rod. Colonies on this medium remain small, but appear to come up in large numbers; they are practically invisible by transmitted light, there being no alteration of the medium around, but are readily distinguished on examination with a lens by obliquely reflected light. On this medium, however, the bacilli undergo involution at an early stage, and we do not regard the medium as an optimum one. For staining the bacilli in sections we found Giemsa's stain most suitable. The ordinary solution is diluted with fifteen parts of water, and the sections are stained overnight. The process of dehydration with alcohol gives the necessary differentiation.

Post-mortem examinations were performed in 26 cases, and in all a pneumonic lesion was present. In 17 the

lesion was bronchopneumonia, in 4 bronchopneumonia with lobar pneumonia, and in 5 lobar pneumonia alone. Of the 5 cases of lobar pneumonia both lungs were affected in 4, an unusually high proportion.

Micro-organisms Present.

In relation to the cause of death, we may mention that in four other cases in which a *post-mortem* examination was not made, the pneumococcus was cultivated from the blood before death. In addition to the ordinary blood cultures in bouillon, growth was obtained also from a drop or two of blood on the surface of agar tubes, and sometimes more than fifty pneumococcus colonies developed in a tube. Apparently the organism was present in unusually large numbers. These septicaemic cases occurred at the early period of the epidemic, before we had permission to perform *post-mortem* examinations on U.S.A. cases, and at this time the proportion of cases of lobar pneumonia was greater than at a later period.

Taking these 30 cases in all, we find that in 13 the cause of death was pneumococcus infection, in 6 streptococcus infection (5 cases of septicaemia and 1 of large empyema), in 4 cases staphylococcus septicaemia, in 1 case meningococcus septicaemia, in 1 case tetragenus septicaemia, and in 1 case septicaemia due to staphylococcus and pneumococcus. Thus, in 4 cases only can death fairly be ascribed to the intensity of the influenza infection.

In addition to the conditions mentioned, various complications produced by organisms other than the *B. influenzae* were of common occurrence—for example, pneumococcic pleurisy, apart from lobar pneumonia (7), pneumococcic meningitis (1), streptococcic pleurisy and empyema (3), ulcerative endocarditis due to *Staphylococcus aureus* (1), streptococcic pericarditis (1), streptococcic peritonitis secondary to empyema (1), and pulmonary abscesses due to various organisms (5). It seems unnecessary to give details with regard to individual cases, as the important points are the cause of death and the secondary complications met with.

Of the 26 cases, bacilli of influenza type were found at the *post-mortem* examination in 22, including all those in which bronchopneumonia was present. In 4 of the 5 cases of pure lobar pneumonia no influenza bacilli could be detected. Cultures were made from 11 cases, and in 10 of these Pfeiffer's organism was isolated without difficulty. Failure in this one case is difficult to explain, as the bacilli present were in fair numbers and had the characteristic features; the picture on microscopical examination of sections also was typical. In the other 11 cases inference as to the presence of the organism was made from microscopical examination alone, but, from our experience, we are confident that in practically all it was really Pfeiffer's bacillus; in many of them its features and its occurrence in characteristic clumps, or within leucocytes, made doubt hardly possible.

Pneumococci undoubtedly played a very important part in the cases observed. Our experience is that they are practically always present within the bronchi, and they are often found along with influenza bacilli in the terminal bronchioles. Croupous pneumonia due to the pneumococcus may be superadded to the bronchopneumonia, or may occur apart from it. Of 5 cases of pure croupous pneumonia we failed to detect influenza bacilli in 4. A purely pneumococcic infection may, however, be regarded in a sense as an integral part of the epidemic. The association of pneumococci with the lesions of influenza will probably be attended by an increase in their virulence; thus there will be a greater tendency for pneumococcus infections to spread from patient to patient. The conditions obtaining on board a transport, for example, are specially favourable to such an occurrence.

Streptococci, though less frequent than pneumococci, were also often met with. We refer below to a particularly virulent form of bronchopneumonia produced by this organism in association with the *B. influenzae*. Staphylococci and Gram-negative diplococci were comparatively frequent, whilst tetrads and various other organisms were not uncommon.

In addition to the case of meningococcus septicaemia mentioned above, there occurred seven other cases of cerebro-spinal fever amongst patients suffering from, or convalescent after influenza, making eight in all. The disease was specially severe, and death occurred in every case. A special feature was the unusually high proportion of three cases of meningococcus septicaemia without meningitis. The marked virulence of the infection may be explained, in part at least, as due to diminished resistance following on influenza. (In two of these cases *post-mortem* examinations were made, but in neither was any influenzal lesion found, the patients apparently having recovered from the latter disease. The other five cases were removed to a civil isolation hospital and *post-mortem* examinations were not performed by us; these seven cases are accordingly not included in our series.)

The Bronchopneumonic Lesion.

From the point of view of morbid anatomy the outstanding feature is the bronchopneumonic lesion. This is of great importance, as, apart from influenza, it is rarely met with in the adult, and never in epidemic form. Both lungs may be studded throughout with patches of consolidation showing the typical grouping, at first pinkish and ill defined, later paler and more distinct. Haemorrhage and oedema are present to a varying extent, and are sometimes extreme when the patches are still of small size. Larger patches may be formed by confluence, but, even in cases of considerable standing, the discrete character may be well maintained, while not infrequently the patches are comparatively firm to the touch, owing to the presence of secondary interstitial change, as will be described. Acute vesicular emphysema is usually a prominent feature, and even interstitial emphysema may be met with. The mucous membrane of the bronchi is is swollen and shows intense congestion and haemorrhage, the colour being frequently of a deep dull red. The larger tubes contain a varying amount of secretion, often blood-stained, and purulent plugs can usually be expressed from the terminal bronchioles. The microscopical picture corresponds, and has a general similarity to that met with in the bronchopneumonia of children. The bronchioles and alveolar passages are tightly plugged, chiefly with leucocytes along with a varying amount of desquamated epithelium, though the latter is sometimes little in evidence. In the acute stage the epithelium may be entirely lost, and a condition of actual erosion of the bronchioles may be present; but in the cases of less intense nature there may be hyperplasia of the epithelium, which may form a thick layer in which mitotic figures are to be found. The consolidated air vesicles are filled chiefly with polymorphs, but fibrin may be present in varying degree; and a common feature is the presence, immediately around the wall of the bronchus, of a ring of air vesicles containing fibrinous plugs. This fibrin is usually dense, and very few leucocytes are present with it. It appears to be practically free from organisms, and apparently represents an exudation in an outward direction from the blood vessels of the inflamed bronchial walls. The importance of this is that such fibrin is difficult of absorption, and in the later stages active organization of it has been found. Thus there results a chronic interstitial pneumonia with complete obliteration of the vesicles involved; in one or two instances this was of extensive nature. Both from clinical facts and from what we have found at *post-mortem* examinations, it is evident that influenzal bronchopneumonia is often difficult of resolution. The patient may suffer from marked cyanosis and dyspnoea for a considerable time, whilst influenza bacilli may be present in the purulent sputum in enormous numbers. Such patients often make an apparently complete recovery, but it is likely that a certain amount of interstitial pneumonia is a common sequela.

In cases fatal at a later stage, some of the larger areas of consolidation are usually pale in colour and firm in consistence, or may show commencing softening; in fact, all stages to typical abscess formation may be met with. This lesion occurred in five of the cases, and in others small abscesses were found on microscopical examination. In one case a superficial group of abscesses had ruptured into the pleural cavity, giving rise to empyema, in which both influenza bacilli and streptococci were present.

In some cases of influenzal bronchopneumonia there is no pleurisy, though the pleural surface appears dull; and on microscopical examination we have found a hyaline swelling of the subendothelial connective tissue, without evidence of the presence of fibrin. A varying degree of fibrinous exudate, however, has been found present in

many cases, and where it was marked we have always found pneumococci, occasionally associated with streptococci. The latter organism, however, tends to produce exudation with more fluid, and all stages up to typical empyema may be met with. In our series of *post-mortem* examinations there were only 2 cases of empyema, but we have also examined the pus from 10 other influenza cases during life, making 12 cases in all. In 2 of these influenza bacilli and streptococci were present, in the other 10 streptococci were present alone. These were the only two instances in which we found infection of the pleural fluid with the bacillus of influenza. There is no doubt that empyema is a comparatively common complication, occurring usually somewhat late, and the possibility of its occurrence should always be kept in view.

Bacteriology.

Looking at the matter from the bacteriological side, we may say that there occurs a descending infection of the respiratory passages with Pfeiffer's bacillus and other organisms, of which pneumococci and streptococci are by far the commonest and most important. An infection of the terminal bronchioles and alveolar passages may follow, giving rise to bronchopneumonia; and when this happens the influenza bacillus appears to us to be the most important causal agent. In sections it can often be found in large numbers amongst the leucocytes in the lumen of the bronchioles, and a large proportion of the bacilli are usually contained within leucocytes. Our results in these respects agree generally with those of Pfeiffer, obtained in the last great epidemic. In some cases the organism appears to be present almost alone, especially in cases which run a less acute course. On the other hand, we have had examples of very acute bronchopneumonia where streptococci were associated in large numbers with Pfeiffer's organism. In these the patches of consolidation were of smaller size and less defined, as described above, and were associated with intense haemorrhage and oedema. There appears also to be a greater amount of loose fibrinous exudate in the adjacent air vesicles than is present in the uncomplicated cases. Actual necrosis of patches of lung tissue was met with in several instances. In one case where there was little consolidation, and where the lesion appeared of trifling nature, microscopical examination revealed the intensity of the infection, streptococci being present in enormous numbers; and there was general lysis of the red cells. In other cases, pneumococci, Gram-negative diplococci, staphylococci, and various bacilli may be present in association with the influenza bacilli. When pneumococci are abundant there tends to be, again, exudation of looser fibrin. At any stage there may be a diffuse infection of the lung with this organism, a croupous pneumonia resulting. We have noted above the frequent occurrence of fibrinous pleurisy due to the pneumococcus, without pneumonia; and this is another illustration of the readiness with which the organism invades the lung tissue in influenza. Septicaemia due to the pneumococcus was found in several cases, and in one case there was a pneumococcal meningitis. In the abscesses we found influenza bacilli along with various other organisms—pneumococci, streptococci, staphylococci, tetrads, etc. At this stage also septicaemia may occur and be the cause of death.

General Considerations.

No one doubts that epidemic influenza is due to a specific organism, yet in hardly any other disease do we meet with such a variety of lesions and complications, produced by various organisms of common occurrence apart from influenza. Apparently the explanation is that the specific organism leads to a diminished resistance of the bronchial mucosa, and thus bacterial growth extends to the finest tubules, and bronchopneumonia frequently follows. The organisms most frequently associated with the *B. influenzae* in the bronchial tubes are pneumococci and streptococci, though staphylococci, tetrads, Gram-negative diplococci, and various bacilli are often present. These organisms play an all-important part in the production of the various lesions — pleurisy, empyema, pericarditis, endocarditis, meningitis, pulmonary abscesses, etc. Another feature, evidently related to diminished resistance, is the frequent occurrence of septicaemia, and this may happen at a comparatively late, as well as at an early stage. Lobar pneumonia also may be met with; it may occur before bronchopneumonia has been established, or, on the other hand, may be superimposed on it. In our series, though not large, there was an unusually high proportion of cases of double pneumonia; in several of these the influenza bacillus could not be detected.

The question comes to be whether the *B. influenzae* (Pfeiffer) is the essential cause of the disease, or whether it is merely associated with an undiscovered virus, possibly ultra-microscopic, as some have supposed. Microscopic examination of sections shows that the influenza bacillus is specially related to the bronchopneumonia, a special feature of influenza; it is often the predominant organism, and may abound not only in the bronchioles but in the air vesicles beyond. In other words, a lesion common in influenza, and rare apart from it, is associated with the appearance of this delicate organism in large numbers; and, as this lesion represents the farthest extension of bacterial growth in a downward direction, it seems not unlikely that the *B. influenzae* is the agent which so markedly lowers the general resistance of the bronchial passages. Thus it may be the real cause of the disease. On the other hand, there is the possibility that the presence of an ultra-microscopic organism underlies all the phenomena; and the results of further investigation on this point must be awaited. But in any case it appears to us that Pfeiffer's bacillus plays a very important part in the production of the characteristic lesions.

THE AFTER-RESULTS OF GASTRIC OPERATIONS.*

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OPERATIONS are performed upon the stomach for various conditions. My own series of 175 operations include ulcers and perforations of the stomach and duodenum, carcinoma of the stomach or oesophagus, hour-glass contraction of the stomach, obstruction of the pylorus due to cicatrices of former ulcers and the pressure of a congenital cyst, haemorrhage, intussusception, and leather-bottle stomach.

There were twenty-one cases of perforation of the stomach or duodenum. Ten of these cases were saved from death, and only in one instance was there a recurrence. In all the eleven who died perforation had existed for more than twenty-four hours when I first saw them, and most of them were well under the influence of morphine. One case in which perforation had existed for forty-eight hours lived for five days, and would probably have recovered save for an attack of pneumonia. In one case which had been perforated for four hours I removed fifty gall stones from the gall bladder at the same operation. The patient made an uneventful recovery, and she has not suffered since. I do not favour these double operations. The performance of a gastro-enterostomy, which has been advocated in such cases, adds considerably to the risk. In my experience it is not advisable; if it were, I should prefer to perform it at a later period.

The prime factors in saving life are to operate upon these cases at the earliest possible moment, and to avoid the administration of morphine. Even if a journey has to be undertaken it would be safer to administer an anaesthetic than to give a dose of morphine, which may make the difference between success and failure.

The gastro-enterostomy operations number 116. Some were performed with the object of giving temporary relief in cases of malignant disease, but the majority were for the purpose of establishing a new route for the exit of food into the jejunum, because the pylorus was partially occluded. In two cases the operation was performed for the relief of symptoms due to hourglass constriction of the stomach. In another case I excised the hourglass constriction. The results in all three cases were equally satisfactory. Hence gastro-enterostomy would appear to be preferable, since it is a far less serious operation than excision.

The immediate mortality in my series of cases is 2 per cent. It is sufficiently small to be almost a negligible factor in deciding upon operation. The suffering due to

* A paper read before the Kidderminster Medical Society.

the operation is not severe, and is usually confined to the following forty-eight hours. The wound generally heals by first intention, and solid food is taken within a week. The failures—that is, patients who have derived no benefit—are not more than 5 per cent. It is possible that these might have been in a worse condition without operation. It is impossible to say why they failed to benefit. It has been suggested that it is due to the closure of the artificial opening, and some surgeons deem it advisable to divide the pylorus and sew up the orifice in order to prevent this. I have never known the artificial opening to close up, although I have seen several *post-mortem* examinations upon patients who had undergone operation and died at varying periods afterwards from other causes.

In some cases complications may occur at a later period. I have experienced three of these:

CASE I.

A man upon whom I performed a posterior gastro-jejunostomy for pyloric obstruction in December, 1914. There were two cicatrices, one over the pylorus and one two inches on the stomach side of it. The patient made an uninterrupted recovery, and remained well until June 21st, 1916, when he was seized with sudden abdominal pain at 8 p.m. I saw him on his admission to hospital the following day at 11 a.m. There were signs of perforation. I opened his abdomen at 11.30 a.m. The peritoneal cavity was flooded with stomach contents. There was a perforation on the left side of the junction between the stomach and jejunum. This was closed and sewn over with Lembert sutures. The abdomen was sponged out and drained. The patient bore the operation well, and made an uninterrupted recovery.

He was again admitted on June 24th, 1917, at 7 p.m., after having been seized with sudden pain at 12.45 p.m., and again he presented signs of perforation. I opened his abdomen at 8 p.m. The peritoneum was flooded with stomach contents, and there was a perforation on the right side of the junction between the stomach and jejunum. This was closed and sewn over with Lembert sutures, and the abdomen was sponged out and drained. The patient made an uneventful recovery, and has remained well up to date.

Out of twenty-one cases of operation for perforation this is the only one which has been performed twice.

CASE II.

A female upon whom I performed posterior gastro-enterostomy for pyloric obstruction in July, 1914. Three years later, November 9th, 1917, she was admitted to hospital with acute abdominal trouble. The cause of the condition was uncertain. On opening the abdomen it was found that there was an intussusception of 25 in. of the jejunum into the stomach through the gastro-enterostomy opening. This was reduced, and the patient made an uneventful recovery.

Although the recurrence of an intussusception of the intestine is rare it has occurred in my practice after an interval of several months. I was naturally anxious about this case, but, so far, the patient has remained well.

CASE III.

A male, aged 37. He was admitted to hospital on December 6th, 1915, at 5 p.m., with a history of sudden abdominal pain, which began at 1 p.m. He stated that he had been operated upon four years previously at another hospital, and described it as "a short-circuit operation." There was a cicatrix in his epigastric region. He had signs of general peritonitis. I opened his abdomen and found the peritoneal cavity flooded with intestinal contents. The junction of a former gastro-enterostomy was found to be adherent to the transverse colon. There was a perforation on the splenic side of this junction, which admitted my finger into a cavity communicating with the stomach, with both ends of the jejunum and with both ends of the transverse colon.

Each of these complications is rare, if not unique. They are no argument against the value of the operation, and they are mentioned only as examples of possible sequelae.

Nature has provided us with a case which demonstrates her approval of this method of treatment. It occurred in the person of a member of our own profession, who had symptoms of pyloric obstruction which subsided after years of suffering. When he died a *post-mortem* examination revealed the fact that nature had performed a posterior gastro-enterostomy for him, and had thereby relieved him of his sufferings.

It is often difficult to decide whether a more drastic operation should be undertaken. Pylorectomy is theoretically more rational, but its greater severity and the larger mortality caused by it render its performance inadvisable when equally satisfactory results can be obtained from gastro-enterostomy. Pylorectomy is not always successful. In one case in which I performed this operation the patient returned in twelve months with a recurrence of her symptoms. I reopened the abdomen to find the pylorus had contracted again—it was not a malignant growth—and I then performed gastro-jejunostomy. This was ten years ago, and the patient has remained well since.

When the case is one of carcinoma there can be no doubt that removal is desirable, provided that the patient is in a condition to bear it. To perform a short-circuiting operation in such a case is unsatisfactory. It may give some relief to the symptoms, it may prolong life, but it leaves the disease, which will inevitably destroy the patient. It is true that the mortality in such cases is high, but with a prospect of complete cure it is a question whether the risk should not be taken. It is for the individual patient to decide. Provided that the conditions are fairly stated, there should be no hesitation in undertaking such operations.

I have operated upon twelve such cases. As an example of success I may mention the case of a woman upon whom I operated on May 17th, 1903, fifteen years ago, for carcinoma of the pylorus, which was later verified by pathological examination. I performed partial gastrectomy, removing about one-third of the patient's stomach. She recovered without any complication and has remained well. I saw her a week ago. I do not know of any other case where life has been so prolonged, but I feel confident that there will be many in the future. At the period when I operated upon this patient there were but few such operations performed.

On April 16th, 1912, I removed more than a third of a man's stomach, together with a portion of his pancreas, which was invaded by the malignant growth. This was verified by a pathologist as a carcinoma. The patient made a good recovery, and remained well for four years, until July, 1916, when he met with an accident to one of his arms, which was followed by tetanus and death. The *post-mortem* examination proved that there had been no recurrence of the malignant growth. In another case I removed about a third of a man's stomach on February 5th, 1907. The patient recovered in spite of an attack of pneumonia, remained in good health, was able to enjoy ordinary diet, and to do his work as a gardener. He remained well until December 12th, 1910, when he developed a carcinoma in his rectum, and died December 16th, 1910.

These three cases may be regarded as cured. If I had performed gastro-enterostomy on any of them the patients would probably have died within a year or two.

Unfortunately, it is not always possible to be certain whether or not a growth is cancerous. As an instance I may cite the case of a woman upon whom I operated on May 7th, 1903—fifteen years ago. She had a mass of growth in her pylorus, which was adherent to the liver and pancreas. I regarded it as malignant and irremovable and performed a gastro-enterostomy. She was well ten years later, and is, I believe, still well. It is more than probable that her condition was not cancerous.

There is a woman in Ward 2 upon whom I operated ten days ago. Her abdomen was opened in London last May. I have a letter from the hospital stating that "her stomach was so largely invaded by malignant growth that a gastro-enterostomy could not be done." I removed about two-thirds of the stomach. She bore the operation well; vomiting has ceased, and she is able to take solid food. The specimen was sent to Professor Leith, who reports that he is unable to find any evidence of malignancy; he regards it as a case of chronic inflammatory ulceration.

It has been stated that cancer in the abdomen often clears up after a laparotomy. I have no evidence of this. The cure in these cases is due, I think, to an error in the diagnosis. There are the rare cases such as the following:

CASE IV.

Leather-bottle stomach, an instance of which I reported in the *Lancet*, February 3rd, 1907. This is probably the smallest stomach in existence. The patient was fed through an opening into the pyloric end of her stomach. She died of uraemic coma five weeks later.

CASE V.

Bleeding from numerous tiny points in the mucous membrane. It was described by Dieulafoy as "exulceratio simplex." I reported a case in the *Lancet*, April 26th, 1902, and at a later date one was reported by Sir Dyce Duckworth and the late Sir

H. T. Butlin. I performed the operation on March 3rd, 1902. The patient made a good recovery, was afterwards married and has had four children. I saw her yesterday when she was in good health and had not suffered from any recurrence of haematemesis.

CASE VI.

A boy of 15 years with a cyst between the mucous and muscular layers of the pyloric end of the stomach. I performed pylorectomy on July 17th, 1906, and reported the case in the *Lancet*, August 18th, 1906.

Perhaps the most diappointing cases are the gastrostomies for the relief of stricture of the oesophagus, which is usually due to malignant disease. These cases are left until the last moment. The patients have experienced much suffering, and as a result of insufficient food have lost a large amount of flesh and vitality. When I have been able to operate upon them early I have succeeded in relieving their distress and prolonging their lives for as much as six months. I cannot claim to have obtained for them a longer respite. The modified Witzel's operation which I perform does not allow any regurgitation of food.

Contrast this experience with the medical treatment of these cases. Those who suffer from pyloric obstruction remain invalids. They continue to exist upon patent foods, they swallow large quantities of medicine, and they use up many hours of their doctor's time in a vain endeavour to obtain relief. Some of them indulge in stomach lavage. They lose weight, amounting in some cases I have seen to five or six stone, more than half their normal weight, and they ultimately succumb, after suffering untold misery. They are found in every consulting room, they go from doctor to doctor, disappointment drives them to quack medicines, and ultimately, often when it is too late, they drift into the hands of the surgeon.

I do not suggest that all these cases should be operated upon without medical treatment, but I do claim that my results justify you in urging these people to consult a surgeon when you find that medical treatment fails, and I would emphasize the necessity of following this course before the condition is so far advanced as to render surgical intervention unduly dangerous, if not hopeless.

A CASE OF VALVULAR DISEASE OF THE HEART, SHOWING UNUSUAL POWERS OF PHYSICAL ENDURANCE.

BY

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EVERY medical officer has come across soldiers who, in spite of evident organic disease of the valves of the heart, have been able to carry on at the front, and have only finally been invalided for some other condition; but the following case is an example of such unusual physical power that it seems worthy of being put on record:

Lieut. A. B., aged 25, infantry officer, was invalided to England on account of slight "gassing," and two months later was seen at a convalescent hospital, still complaining of depression, especially in the mornings, of weakness, and of shortness of breath on climbing hills.

History.

He stated that he had never been ill except when, at the age of 13, he suffered from an attack of rheumatic fever, and his mother had made him "go carefully for twelve months afterwards." He had been an athlete all his life, and won many prizes in this capacity at school. At his university he was captain of both cricket and football teams. During the last four years he had developed specially the 100 yards race. He had been in the army for about three years, and had never been sick or laid up, except as follows later.

Last October, while in France, he won the 100 yards championship of his division, and also the broad jump, doing the former in ten seconds, and attaining 22 ft. 6 in. in the latter. He was presented by the G.O.C. with a gold medal as the champion athlete of the whole corps. During last winter he was captain of his battalion football team, and played in every game during the season.

In November last he was blinded for two hours by the near explosion of a shell, and since then his right eye has not been as good as formerly, but he carried on all military duties and continued, as already stated, to lead his football team until the spring, when he was slightly gassed. He was then invalided to England, though unwilling to leave France.

Condition on Examination.

The patient was fairly fit in appearance, but stated that he was often depressed in the morning. If he exerted himself much he suffered from palpitation and shortness of breath. All these symptoms only dated from the gassing. The pulse was moderate in rate and quite regular, but of water-hammer type; no distinct capillary pulse could be made out. The liver was not enlarged, and there was no oedema. On percussion of the heart the right border was found to be one inch beyond the edge of the sternum. The apex beat was felt heaving powerfully in the sixth intercostal space in the nipple line. On auscultation a loud double aortic murmur was heard and also a very evident double mitral one.

The condition was evidently one of aortic incompetence, and possibly stenosis (although the systolic murmur here might have been due to dilatation of the root of the aorta), and of mitral leakage and probable stenosis, although the presystolic murmur might have been of the Flint type. The heart was certainly considerably hypertrophied.

Dr. Lewis, in his paper in the BRITISH MEDICAL JOURNAL of December 14th, p. 647, on Medical Reports on Soldiers discharged from the Army for the conditions known as "D.A.H." and "V.D.H.," says that "In some patients with aortic disease exercise tolerance is perfect. Many soldiers have fought in the front line with this lesion and without mishap." He continues: "But these are cases in which the lesion, as judged by the state of the pulse, is slight and in which there is no material enlargement or other complicating factor."

Every one has seen cases of aortic regurgitation of this "slight type," who have stood military service for long, and I have notes of a number who have endured even unusual strain without a breakdown, but the above case is out of this class. The patient would undoubtedly come under Dr. Lewis's class of "developed aortic disease"; yet he not only stood the stress of active service in the front line for years and was at last only invalided on account of gassing, but actually outrivalled all his fellows as an athlete. His reserve heart power must have been greater than that of most men having sound hearts.

The case emphasizes the correctness of the view that has so often been urged in recent years by Sir James Mackenzie and others, that everything depends upon the state of the heart muscle. This patient had evidently an exceptionally strong and sound myocardium.

The reason why most cases of chronic V.D.H. break down is not so much on account of the presence of the valvular lesion as because the infection which caused the damage of the valve at the same time invaded the heart muscle more or less. In the case here recorded the rheumatic invasion at the age of 13 must have been unusually limited to the endocardium.

Nevertheless, valvular lesions, whether causing stenosis or incompetence, are not only always *loci minoris resistentiae* against further infection, but must also, by their disturbing influence upon the smooth onflow of the blood, throw extra work on the heart muscle, and I for one do not go so far as some in the modern tendency to ignore such lesions. It is not my intention here, however, to go further into this debatable ground, but rather merely to put on record what appears to be a case of very exceptional endurance of a hampered heart.

NASAL DIPHTHERIA AND THE EPIDEMIC OF INFLUENZA.

BY

E. MARTEN PAYNE, M.B.ABERD.,

BLACKBURN.

IT seems to have escaped the notice of those who have published notes on the prevailing epidemic of influenza that a large number of patients supposed to be suffering from that disease are in reality suffering from nasal diphtheria.

Feeling convinced that the heavy mortality during the epidemic could not be due to influenza pure and simple, I began to examine certain cases for nasal diphtheria, and found that many cases from which I took nasal swabs gave positive results. In many a provisional diagnosis of influenza had been made, and they were apparently convalescent when the swabs were taken. Others, at the onset, showed signs which indicated the trouble, and in others again the swabs were taken almost at random

from patients who walked into my surgery complaining of "influenza" and not apparently very ill. All the swabs were examined for me at one of two recognized pathological laboratories.

The following are short notes on a few selected cases:

Case 1.—A child about two years old was brought by its mother. It was pale, listless, and evidently seriously ill. No physical signs could be found in the chest or throat. A swab taken from the nose was found to be positive for diphtheria.

Case 2.—A Royal Marine who came to my surgery said he was suffering from "flu." I took a swab from his nose and told him to come to me again the next day. He did not return, but the swab was found to be positive. A few days later I received an urgent letter from his C.O. saying that the man had returned to duty and had related what had happened, and I gave particulars as requested, but so far nothing more has been communicated to me on the subject.

Case 3.—A soldier on leave, seen in bed, complained of headache and nose bleeding. There was considerable pyrexia. The throat was red, but there were no physical signs in the chest. A swab was taken from the nose. After a day or two dullness and fine crepitations were found at the left base, and a positive report was returned by the pathologist with regard to the swab. The sputum was rusty and was found to contain Klebs-Loeffler bacilli.

Case 4.—A soldier complained of pain in back and legs and cough. There was a mitral systolic murmur and the heart was somewhat dilated. He had an up and down temperature (maximum about 102°) for a few days. A swab taken from the nose was found to contain diphtheria bacilli.

Case 5.—A soldier, who had been gassed, complained of sore eyes and throat; the tongue was furred and the breath foul. He was pale and very ill. He had an up and down temperature (maximum about 103°), and in a few days began to develop phlebitis in the left leg. A swab taken from the nose was found to contain Klebs-Loeffler bacilli.

Case 6.—A soldier, who had been gassed and was suffering from ophthalmia, had pyrexia reaching 104°. A swab was taken from the nose and diphtheria bacilli found.

Case 7.—A soldier, complaining of influenza, had a mitral systolic murmur. There were a few râles in the lungs, and he expectorated rusty sputum. There was moderate pyrexia which subsided after a few days. A swab was taken from the nose and diphtheria bacilli found.

Case 8.—A man, whose illness had been diagnosed influenza, complained of sore throat. A swab taken was found to contain *B. diphtheriae.*

These are only a few typical cases out of a large number of similar ones which have come under my notice, and I am persuaded that a large number of the deaths recorded as being due to influenza during the present epidemic were due to diphtheria.

Some show a tendency to make light of nasal diphtheria, but there can be no doubt that it is a condition which is fraught with grave danger not only to the patient, but also to others with whom he may come into contact, and it is all the more dangerous because, as I gather, there are comparatively few practitioners who look for it.

Some years ago there was in this town an epidemic of mumps. In all cases that came under my notice I took swabs, and in many proved that the real cause of the swelling of the glands was diphtheria. I was called to see a boy who had died suddenly. No doctor had seen him, but his mother had been treating him after her fashion for mumps. A swab taken from the nose after death gave a positive result for diphtheria. About the same time I was called to see a baby who had died suddenly. The history was not very definite. The child had been ailing a few days, but its condition had not given much anxiety and no doctor had been sent for previous to its death. A swab taken from the nose was found to contain diphtheria.

At a discussion on influenza at a meeting of the Royal Society of Medicine on November 13th, reported in the BRITISH MEDICAL JOURNAL of November 30th, p. 603, Dr. B. H. Spilsbury said that

> He regarded the condition as a primary infection of the air passages by Pfeiffer's bacillus, the failure to find this organism in 40 per cent. of his *post-mortem* cases being due either to the search not being sufficiently thorough or to the organism having disappeared before death.

It would be interesting to know whether in those *post-mortem* examinations Dr. Spilsbury examined the nasal fossae, and, if so, whether he examined them for the presence of the *Bacillus diphtheriae.*

SPONTANEOUS PNEUMOTHORAX IN THE COURSE OF INFLUENZAL PNEUMONIA.

BY

F. PARKES WEBER, M.A., M.D., F.R.C.P.

THE occurrence of pneumothorax in connexion with an attack of pneumonia or bronchopneumonia is so rare that the following case is worthy of record:

F. M. K., aged 38, a strongly built man, a mechanic and a good wrestler, was admitted to hospital on October 31st, 1918, with a temperature of 103.6° F., pulse 96, and respiration 28. He had apparently been laid up with influenza since October 26th. Two grains of quinine were ordered three times a day, and a mixture containing some sodium salicylate was given also. On the morning of November 2nd slight crepitation was heard over the lower parts of both lungs behind. The temperature was 103° F., pulse 100, respiration 24. The urine contained a trace of albumin and some hyaline and cellular tube casts. On November 3rd there was marked dullness on percussion over the back of the lower lobe of the left lung, and on November 5th there was much crepitation over the same area. From the time of admission to November 5th the temperature varied between 101° and 105° F., pulse 92 to 120, respiration 24 to 36.

On the early morning of November 6th the temperature was only 98.4° F., but the pulse was 128, and the respiration was 48. At 11 a.m., when I examined him, he was sitting up in bed, extremely dyspnoeic, cyanosed, and anxious. The cardiac apex beat was extremely displaced to the left; the right side of the thorax was resonant, but moving much less than the left side. On auscultation of the right side the breath sounds, heard rather faintly, were of somewhat amphoric character. Evidently there was pneumothorax on the right side (previously the better side of the two), though the bell sound was absent. On introducing a cannula into the right pleura, air bubbled out from the end of the attached tube (under water); more air was removed by aspiration. Normal breath sounds were then heard over the right side of the front of the chest, the heart was less displaced, and the extreme dyspnoea was partially relieved. In the afternoon the temperature was 103° F., pulse 120, respiration 40. On the morning of November 7th there was evidently relatively little air remaining in the right pleura, but decided dullness in the right infrascapular region indicated the presence of fluid pleural effusion. The cardiac apex beat was still moderately displaced to the left. The temperature was 102.4° F., pulse 134, respiration 40. There was a tendency to delirium. In the afternoon the temperature was 102° F., pulse 130, respiration 42. The patient died at about 6 o'clock on the following morning (November 8th).

The necropsy showed fibrinous deposit with a moderate quantity of sero-purulent fluid in both pleurae. The greater part (lower portion) of the left lung was solid (red hepatization) from pneumonia; there were likewise in that lung a few small scattered abscesses. There was no consolidation in the right lung, but in the lower part of the upper lobe were several small abscesses, some of which were subpleural—that is to say, situated quite superficially beneath the visceral pleura. I did not see the actual opening, but doubtless it was the bursting of one of the superficial (subpleural) abscesses which gave rise to the pneumothorax. There was no free air in either pleura, and the heart was not obviously displaced. The heart was slightly hypertrophied (weighing 13 oz.), doubtless as a result of the patient's previous athletic habits.

A case of pneumothorax occurring in connexion with an attack of pneumonia was recorded by Ménétrier and Pascano in 1915,[1] but in that case (a man aged 54) according to the findings at the *post-mortem* examination, the pneumothorax was probably due to the bursting of a superficial emphysema bulla during an attack of lobar pneumonia. Another case, in a bricklayer aged 40 years, was recorded by C. B. M. Aldridge in 1915.[2] The patient recovered. Recovery also took place in the case of a man, aged 35 years, described by R. G. Hann.[3] Hann adds summaries of several cases previously recorded, and quotes Black's collection of 918 cases of pneumothorax, in which not a single one is ascribed to pneumonia. Out of 7,868 cases of pneumonia, collected for statistical purposes by the Royal Society of Medicine, pneumothorax was a complication in three cases only, two of them proving fatal.[4]

At a meeting of the Philadelphia Pediatric Society on January 12th, 1909,[5] C. H. Weber and C. Y. White reported the case of a child, aged 3½ years, suffering from pneumonia, in whom pneumothorax occurred on the eighth day of the disease without any paroxysm of coughing or other unusual effort. The necropsy showed a perforation near the lower border of the upper lobe of the left lung. The neighbouring pulmonary tissue was consolidated by pneumonic infiltration.

A case of pneumothorax complicating bronchopneumonia in a boy, aged 2 years, was described by Dr. Alice Sanderson in 1911.[6] She refers to twelve published cases of pneumothorax in children under 16 years, but none of these seemed to be due to pneumonia or bronchopneumonia. O. Meyer, in 1916,[7] reported two cases (one of them fatal) of pneumothorax in children resulting from influenzal lung affections. Sidney Matthews[8] (1918) reports the case of a girl, aged 7 years, who recovered from pneumothorax of the left side following an attack of bronchopneumonia after whooping-cough and measles.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SURGICAL EMPHYSEMA IN A FATAL CASE OF INFLUENZA.

DR. GARRETT'S case in the BRITISH MEDICAL JOURNAL of December 21st, 1918, p. 686, suggests the publication of these notes.

A strong, healthy girl aged 19, who in August last was able to swim two miles in the sea, was taken ill with influenza on November 19th. Two of her sisters were taken ill at the same time and developed pneumonia.

On November 21st the patient had well marked bronchitis and bronchial asthma, and on November 22nd pneumonia. During the night of November 23rd she suddenly became very collapsed, and from this time until she died it was scarcely ever possible to count her pulse. Cyanosis and pallor were very marked.

There was very great dyspnoea, aggravated by the slightest exertion, so that it was not possible to turn her over to examine the back.

On November 25th surgical emphysema of the face, neck, and upper part of the chest was discovered, and there was resonance over the mediastinum. The emphysema gradually diminished. She was kept alive by brandy, oxygen, and injections of pituitrin and digitalin until December 2nd, when she died. There was no *post-mortem* examination.

The surgical emphysema appears to have been due to a leakage of air from the lower part of the trachea or a main bronchus in the mediastinum. I think it occurred on the night of November 23rd, and caused the sudden collapse which then took place.

Bedford. W. GIFFORD NASH, F.R.C.S.

A CASE OF INVERSION OF THE UTERUS.

I RECENTLY received an urgent notification from a midwife to visit a case. The midwife informed me that the labour had been slow but otherwise normal until, less than five minutes before my arrival, there was a severe pain followed by rapid delivery of placenta and collapse of the patient. The midwife having received the placenta and uterus in a flamed container, maintained her position, and ordered a relative to get stimulants, to apply hot bottles, and to raise a minimum of dust.

Shock was profound; the radial pulse was not palpable, respiration was shallow and apparent in epigastrium only, the conjunctival reflex was absent. A diagnosis was made by inspection alone. Provided with india-rubber gloves but no means of rapidly sterilizing them, a three-second scrub up in lysol solution was substituted. The placenta was completely separated, the membranes covering the everted surface of the uterus non-adherent, and there was no bleeding. Reduction proved easy, and was followed by a strikingly rapid recovery from the shock.

According to Atthill (Tweedy and Wrench), "In order for inversion of uterus to occur, it must be in a partially atonic condition and the placenta situated on the fundus." In this case the woman was 19 years of age, of poor physique, and had given birth to her elder child in her sixteenth year. I feel justified in assuming that a partially atonic condition did occur in this case. The placental site was at the fundus and somewhat anterior.

The midwife protests that she felt the fundus immediately after delivery, then turned her attention to the child, and did not again interfere with the mother until, warned by the sudden severe pain, she seized her flamed container, and was just in time to place it in position to receive the placenta, etc. This statement may be taken to exclude any possibility of pulling on cord or pressure on fundus.

The salient features in treatment to be learnt from this case were (1) immediate reduction of uterus; (2) the masterly inactivity of the nurse, which minimized the risk of sepsis; (3) the necessity of a general practitioner providing himself with some "always ready" sterilized package to contain gauze and gloves. The woman did not become septic, and made an uninterrupted recovery.

Platt Bridge, Wigan. J. A. WATSON, L.R.C.P.

Reports of Societies.

WAR SURGERY OF THE LUNG.

AT a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, with Sir JOHN W. MOORE in the chair, Colonel WILLIAM TAYLOR briefly reviewed the surgery of the lung as carried out at the front. He showed that the change was simply that of harmonizing or adapting the principles of surgery, as they are now applied to other wounds, to those of the lung or chest. It was estimated that the mortality due to chest wounds at the regimental aid posts varied from 25 to 30 per cent.; at the casualty clearing stations it averaged about 18 to 20 per cent., while at the base hospitals it was about 10 to 12 per cent. The average general mortality of chest wounds was about 18 to 20 per cent. This high mortality was due to the fact that shell wounds preponderated over bullet wounds to the extent of 3 to 1. The mortality of shell wounds as compared with bullet wounds was as 14 to 1; it was the risk of sepsis in connexion with shell wounds that rendered them so dangerous. The mortality was highest during the first forty-eight hours. Open wounds of the chest were grave as compared with closed wounds; they were at least twice as dangerous. Lung wounds, like other wounds, were contaminated by the mere entrance of the foreign body, whether retained or not. Like any other wound, there was an area of necrotic tissue which formed a culture medium for the growth of organisms. Twenty-five per cent. of wounds of the lung proved fatal from haemorrhage and asphyxia. Surgeons now endeavoured to arrest the bleeding by direct surgical intervention at many casualty clearing stations. It had been shown that the operation of thoracotomy has little or no effect upon external blood pressure. Operations could be performed successfully upon the chest and lung in patients with a blood pressure as low as 50 mm. Hg—a point of great practical importance. The gravity of the prognosis of lung wounds was much increased by the frequency with which pleuro-pulmonary lesions of the opposite side occurred. Infection of the haemothorax in bullet wounds was exceptional. With an opening in the thoracic wall an aërobic infection from without was added to the anaërobic infection arising from the pleuro-pulmonary wound; it was partly on this account that open wounds of the thorax were so dangerous. The gravity of chest wounds from the fifth day onwards was due to pleural suppuration much more than to infection of the lung itself. The treatment of punctured wounds of the lung depended upon whether the wound was superficial, whether the foreign body was retained, or whether the case was one of the through-and-through type. The foreign body was removed when possible together with fragments of bone and pieces of clothing. The track was cleansed and the opening into the lung carefully closed. Primary extraction of all foreign bodies from the lung must be considered the rational treatment for preventing infection. Access could be gained to the lung most satisfactorily by an incision from the mid-axillary line to the parasternal region over the fifth rib. Several inches of the rib were excised, and the ribs above and below widely retracted. Openings in the diaphragm must be closed. The entire pleural surfaces should be wiped clean and the

opening closed by careful adjustment of the tissues in layers. Drainage was not desirable, and was not employed—in fact, it was positively dangerous. Gas and oxygen, or chloroform with oxygen, were the general anaesthetics used, but local anaesthesia might be employed satisfactorily. Ether must never be given. Blood transfusion was frequently given before or after operation. Morphine was always freely given and camphor injected if necessary. Great care was taken to prevent the patient breathing cool air. Watch was kept subsequent to operation for the accumulation of fluid in the pleura, and puncture was performed daily to obtain the fluid for bacteriological examination. Increasing infection of the fluid was generally treated by the removal of one or two stitches and the insertion of a drainage tube, but repeated aspiration had been successful in many cases. Duval had shown that the lung could be delivered on to the chest wall as intestine could be brought out of the abdomen.

AT a meeting of the North of England Obstetrical and Gynaecological Society, held in Liverpool on December 13th, with the President, Mr. MILES PHILLIPS (Sheffield), in the chair, Mr. W. W. KING showed two cystic tumours of the vulva of somewhat doubtful pathology: the first was probably a cystic adenoma of Bartholin's gland and the other a cystic endothelioma. Dr. BLAIR BELL showed an abscess in a fibromyoma undergoing red degeneration and encephaloid cancer of abominal wall secondary to paracentesis abdominalis for ascites due to intra-abdominal carcinoma. Dr. J. H. WILLETT showed a case of ectopic gestation, in which the mole, about the size of a hen's egg, was lying in the pouch of Douglas and both Fallopian tubes were apparently normal, except that on the right side a salpingotomy had been done some years previously, and this was found to be closed. Dr. LEITH MURRAY showed a specimen of sessile red fibroid on anterior wall of uterus, causing acute symptoms during pregnancy and enucleated at the twenty-first week, without interruption of gestation. Dr. FLETCHER SHAW described a case of extrauterine pregnancy which had progressed to the fifth month and for which he had had to do an abdominal section on account of severe pain. Dr. BRIGGS read a paper on the radical cure of complete procidentia, with notes of several illustrative cases.

Rebielus.

THE STORY OF THE CANADIAN ARMY MEDICAL CORPS.

WHEN in the dark days of the winter, now four years behind us, the people of the home countries began to get a true measure of the task before them, when, indeed, they knew that German troops had pushed forward till they saw the glint of the waters of the English Channel, the thing that did most to hearten them was the resolve of all our sister nations within the empire to defend the right for which we stood. It was not only the bigness of their effort, but the manner of it. Citizen soldiers of great Dominions, they might have resented being absorbed into the general force. In a spirit of true comradeship they quietly insisted that it was their fixed intention to be treated and used as a part of the single force of Britain and Greater Britain. They recognized at once the necessity of unity of command and the fullest community of effort. By no branch of an overseas contingent was this purpose better achieved than by the Canadian Army Medical Corps. Events were very soon to prove that the principle, in its application to that corps, was not only generous but wise. Its wisdom was tested at the second battle of Ypres, the first active operations in which the Canadians were engaged. From April 22nd, 1915, to May 4th, when the battle ceased, the number of wounded handled by the Canadian medical units was 10,043, but of these only 2,062 were Canadians. The figures analysed a little further give even more striking proof of the merging of British forces into a single instrument. At the beginning of the battle the most critical section of the front—the junction between the British and the French—was held by the Canadians (2nd and 3rd Brigades). The magnificent fight they made and the way in which they refused to be cowed by the chlorine drift gas, then first used by the Germans, was the splendid beginning of the second big German failure. But their numbers were incredibly small for such a feat, and the first essential was to reinforce them with imperial troops. What happened is reflected in the medical statistics. On April 24th the casualties treated in the Canadian field ambulances numbered 1,424, and of these 714 were Canadians and 490 imperial; on April 27th the number was 1,864, but the proportional distribution was more than reversed, 266 Canadian and 1,530 imperial. This does not represent the whole of the work done by the Canadian Army Medical Corps, for they treated also some Indian and French wounded, and the totals do not include men first treated at Canadian advanced dressing stations and then sent to dressing stations of the imperial forces.

We make these observations and quote these statistics by way of introduction to the first volume of the *War Story of the Canadian Army Medical Corps*,[1] which Colonel J. G. ADAMI, M.D., F.R.S., A.D.M.S. in charge of records in the office of the Director-General of Canadian Medical Services, is writing. In this volume the story of the first contingent is brought down to the autumn of 1915. When it arrived in England in October, 1914, it was sent into camp under canvas on Salisbury Plain. It had undergone preliminary training at Valcartier before embarkation, and the plain was thought a suitable area for the next stage, though those who knew what a chalk down with its cap of clay can be in a wet winter wondered. The winter was very wet, and the contingent suffered extreme discomfort, but, so long as it was under canvas, little sickness. When, after some six weeks, the discomfort of tent life and the increasing cold of winter, induced the authorities to replace tents by hutments, influenza and throat troubles began to spread at once and rapidly. Major MacDermot, then a regimental medical officer, attributed this change to accumulation of dust, insufficiency of fresh air, and the loss of the comparative segregation of illness provided by the tents, when a number of men previously scattered through five or six tents were crowded together in one hut. A very serious feature of the situation was the appearance of a series of cases of cerebro-spinal fever; they were scattered through eighteen units on the Plain, and in only one was there anything approaching a regimental epidemic. Where the infection came from is not clear, but there had been four cases at Valcartier in September. It must, however, be remembered that the disease was occurring, though in small numbers, among the civil population in this country that autumn. As to the mode of dissemination, it did not appear to be due to room relations, and there was a suspicion that the disease was conveyed through partially rinsed mugs and glasses in the canteens. Afterwards at Witley camp a striking reduction in the number of cases of ulcerative stomatitis followed the enforcement of a regulation that in public drinking places the edge of every glass or mug shall be dipped momentarily after use into boiling water in the presence of the customer.

The first Canadian Division arrived in France in February, 1915, but the honour of being the first Canadian unit in France belongs to the 2nd Canadian Stationary Hospital which opened up a hospital of 300 beds at Le Touquet at the end of November, 1914. Moreover, the 1st Canadian Clearing Station was the first Canadian unit to participate in actual fighting; it was present at the battle of Neuve Chapelle. Nearly a third of the volume is properly given to an account of the second battle of Ypres, where the organization of the Canadian Army Medical Corps was tested to the uttermost. How well it responded this volume tells, and Colonel Adami is fully justified in saying that "at Ypres, at a bound, that service showed itself completely competent; and, as in matters military the eventual responsibility for every action falls upon the officer commanding, so rightly the credit for the success of the Canadian medical operations at Ypres should before all be awarded to the officer who controlled those operations, Colonel G. L. Foster, A.D.M.S.," who now, as Major-General Foster, C.B., is Director-General Medical Services, Overseas Military Forces of Canada.

[1] *War Story of the Canadian Army Medical Corps.* By J. G. Adami, M.D., F.R.S., temporary Colonel C.A.M.C. Vol. i. Published for the Canadian War Records Office by Colour, Ltd. (Crown 8vo, pp. viii + 285; illustrated.

The next chapters deal with the actions at Festubert and Givenchy, and then with the long period of trench warfare in the Plugstreet area, where the minds of the medical staff were chiefly occupied with the purification of water and disinfestation of clothes. In spite of the multiplicity of details handled and the large number of names of places and persons he mentions, Colonel Adami has traced the ups and downs of the fights in 1915 and the part the C.A.M.C. had in them with the skill of an accomplished story teller. The reader is carried along breathless from one tight corner to another. Colonel Adami has depended largely upon the diaries of individual officers, and he does not disdain to glean from them personal touches which give a more vivid impression of the actual conditions than could be got from a formal description. Thus there was the thankfulness of Colonel Rackes for what at the moment seemed like a stroke of genius of the bearers who contrived for him high trestles on which the stretcher was placed to save the backaching labour of bending over the stretcher on the floor, a simple thing when you have thought of it and found the trestles. Then there is the picture of Colonel Ross at No. 1 Field Ambulance working away with no tunic and no belt, attired in an old green sweater, and getting things done; and the note of the M.O. of the 2nd Brigade, who thought our artillery response to the hurricane of German shells disappointing and depressing, sounding "like a pea-shooter in a foundry."

In the concluding chapters of the volume the work of various medical units and their establishment in France is described and administrative methods are fully explained, but in this direction the most valuable part of the book will be the account, given incidentally in the narrative of the battles, of the various difficulties encountered and surmounted in succession by General Foster, whose portrait appropriately forms a frontispiece to this volume. It should be added that excellent sketch maps are provided, showing the position of the medical units at several stages of the battles of Ypres, Festubert, and Givenchy.

THE A.A.M.C. IN EGYPT.

SIR JAMES BARRETT'S handsome volume, *The Australian Army Medical Corps in Egypt*,[2] gives, in the words of the subtitle, an illustrated and detailed account of the early organization and work of the Australian Medical Units in Egypt in 1914–1915. The author and his collaborator, Lieutenant P. E. DEANE, were both connected with No. 1 Australian General Hospital, the one as registrar, oculist, and aurist, the other as quartermaster; and a large part of the book is based on their personal experience of that hospital—its origin, its journey overseas, and its arrival, settlement, and work in Heliopolis and the surrounding district. Colonel Barrett had been secretary and executive officer of the Australian branch of the British Red Cross Society, and he subsequently held various other medical administrative posts. He was for a time A.D.M.S. and consulting oculist and aurist to the Australian Force in Egypt, while at the height of the emergency due to the casualties from the Gallipoli landing he was appointed a member of the Executive Committee of the British Red Cross Society in Egypt, upon which he did valuable work. His criticisms of the policy, or lack of policy, of the Australian Red Cross and his recommendations for securing greater efficiency in the military medical service come, therefore, from one who was in the very middle of events during that anxious time. His lively narrative reveals the problems that faced the A.A.M.C. in Egypt, and the admirable manner in which that corps responded to the emergency. The book is thus interesting as a story of human effort in time of stress and valuable as a record of medical administration under difficulties.

As everybody knows, discipline is not the strong point of the gallant Australian fighting men, and the tact and firmness of commanding officers has often been tried pretty highly. Consequently, it is not surprising to read that the venereal disease problem gave a great deal of trouble in Egypt, though its main features did not differ materially from those presented by the problem elsewhere. Simple leaflets and addresses warning the men against this danger and the allied danger of drunkenness were given to troops on arrival; but notwithstanding these and other efforts, which received the warm support of General Birdwood, the amount of venereal disease continued to cause anxiety—1,344 men were returned to Australia disabled, and 450 were sent to Malta. Ample provision of soldiers' clubs, providing a "reasonable, healthy, and decent alternative" to misbehaviour, is regarded by the author as perhaps the most effective of the various means for checking this evil. Surveying the whole campaign after his second tenure of office in Egypt, he concluded that the fundamental fault of the Australian Army Medical Service was the insufficient attention given to the prevention of disease generally.

The book is dedicated to Sir Henry and Lady MacMahon, the High Commissioner and his wife, in recognition of their services to the Australian sick and wounded in Egypt. There are many illustrations, reproduced for the most part from photographs by Private Frank Tate, which add to the interest of a work that should find many readers.

[2] *The Australian Army Medical Corps in Egypt.* By James W. Barrett, K.B.E., C.B., C.M.G., M.D., F.R.C.S., Temporary Lieut.-Colonel R.A.M.C., lately Lieut.-Colonel A.A.M.C.; and Lieutenant P. E. Deane, A.A.M.C. London: H. K. Lewis and Co., Ltd. 1918. Demy 8vo, pp. 271; 36 illustrations. 12s. 6d.)

NOTES ON BOOKS.

IN the fifth edition of his *Textbook of General Bacteriology*[3] Professor JORDAN has successfully surveyed the very wide field of bacteriology and has not confined his attention to the commoner pathogens of human diseases. There are excellent chapters on the filtrable viruses, the bacteriology of milk and milk products, on bacteria and the nitrogen cycle, on bacteria in the arts and industries, on the bacteria of air, soil, and water, and a fascinating description of the bacterial diseases of plants. In a new chapter on typhus fever the claims of the bacillus of Plotz to be the specific organism of the disease are advocated, but at the present time few would be disposed to regard it as more than a secondary invader. Consideration is given to the varieties and distribution of pneumococci, to the Schick reaction, to mouth entamoebae and to the *B. abortus* of Bang. We note that the author makes no mention of the *Spirochaeta icterohaemorrhagiae* and still considers the *B. proteus* to be the cause of Weil's disease. Bibliographical references are given at the foot of the pages and should prove useful to the advanced student. The author has succeeded in his attempt to furnish in English a general introduction to the subject with some regard for perspective and with emphasis on general rather than on special questions.

A Course in Food Analysis,[4] by A. L. WINTON, furnishes an excellent introduction to the subject and provides a thorough training in the numerous procedures adopted in this important branch of chemistry. The directions are explicit, so that the intelligent student with this book as his guide will be able to surmount the difficulties that lie in his path. Careful selection has been made of the best methods of carrying out each determination. The author estimates that the course can be completed in forty laboratory periods of four hours each. For the student starting out to become a food analyst this work should prove exceedingly helpful, and, although it covers more ground than that usually surveyed by the D.P.H. candidate, it will be useful to the teacher in charge of the instruction of public health students. The paper and binding are good, the print large and clear, the illustrations numerous, and the whole makes an attractive volume of convenient size.

[3] *A Textbook of General Bacteriology.* By Edwin O. Jordan, Ph.D., Professor of Bacteriology, University of Chicago. Fifth edition. Philadelphia and London: W. B. Saunders Company. 1916. (Roy. 8vo, pp. 668; 177 figures. 15s. net.)

[4] *A Course in Food Analysis.* By Andrew L. Winton, Ph.D. London: Chapman and Hall, Ltd.; New York: John Wiley and Sons. 1917. (Med. 8vo, pp. ix + 252; 107 figures. 7s. net.)

MEDICAL AND SURGICAL APPLIANCES.

Nasal Douche.

MESSRS. C. J. HEWLETT AND SON, 35–42, Charlotte Street, E.C.2, have placed on sale a nasal douche of British manufacture which is handy and easily operated. A finger placed on the orifice in the glass dome regulates the flow of liquid. The contents do not spill when being used or when at rest. The glass is toughened and so can be sterilized by boiling without fear of breakage.

THE INFLUENZA EPIDEMIC.

JUDGED by the mortality statistics of the Registrar-General's ninety-six great towns, it appears that the subsidence of the existing wave of influenza is definitive. In the week ending October 5th, 1918, 187 deaths from influenza were returned in the ninety-six great towns, having an estimated mid-1917 civilian population of 16,545,401. In the following week there were 647 deaths, and thereafter down to the week ending December 14th (the last available record at the time of writing) not less than a thousand deaths were recorded for each week, the maximum being 7,557 for the week ending November 9th. As was to be anticipated, the rate of decline has been smaller than that of increase; thus the third week before the maximum provided 1,887 deaths, while the fifth week subsequent to it gives almost the same number, 1,885. Taking the maximum week as the point of division, 14,615 deaths occurred before and 21,600 since those of the week ending November 9th.

As in other epidemics, considerable variations both of average mortality and date of onset are perceptible, but a just interpretation of these phenomena must depend upon the collection of more particulars than the records of deaths. Some points are brought out in the table, which has been constructed on the following lines: As examples of Southern towns we have selected Portsmouth, Southampton, Plymouth, and Exeter (gross population, 544,878); Midland towns are Birmingham, Coventry, Leicester, Nottingham, Derby (gross population, 1,566,786); Lancashire towns, Liverpool, Manchester, Salford, Oldham, Blackburn, Preston (gross population, 1,941,439); Yorkshire towns, Bradford, Leeds, Sheffield, Hull (gross population, 1,399,039); North-Eastern towns, Sunderland, South Shields, Gateshead, Newcastle (gross population, 633,950). We have calculated for the various groups the crude death-rates from influenza per week per million living from the week ending October 26th to that ending December 14th.

Weekly Death-rates per Million Living from Influenza in Groups of Towns.

	Week ending Oct. 26th.	Week ending Nov. 2nd.	Week ending Nov. 9th.	Week ending Nov. 16th.	Week ending Nov. 23rd.	Week ending Nov. 30th.	Week ending Dec. 7th.	Week ending Dec. 14th.
Southern towns ...	**672**	464	196	94	68	59	46	22
London	312	**610**	604	413	293	234	164	80
Midland towns ...	174	310	370	438	411	**516**	331	167
Lancashire towns ...	145	167	221	282	311	**341**	258	142
Yorkshire towns ...	352	**652**	636	474	365	288	177	87
North-Eastern towns	19	96	263	304	483	**629**	500	276

The contrast between the Southern and North-Eastern groups (all the towns except one being seaports) in respect of the date of maximum mortality might, taken alone, be thought to sustain an argument in favour of an extension northwards, but the comparison of the Lancashire and Yorkshire cities shows how rash any such generalization would be. This latter comparison is also instructive in connexion with variations of mortality rates, and invites an analysis of the occupational incidence.

In any summary grouping, however, it is impossible to avoid bringing together units not really *in pari materia*. Thus our Lancashire towns include the great port of Liverpool, for which the maximum (in the series of weeks chosen) occurred in the first week with 230 deaths, while Manchester reached its maximum of 374 deaths in the week ending November 30th. The seaports (other than London and the N.E.)—namely, Liverpool, Portsmouth, Southampton, and Plymouth—all give maxima in the first or second week of our series, but differ considerably amongst themselves in the severity of incidence. Thus Portsmouth, with a population of 198,527, returns 317 deaths in the eight weeks; Liverpool, with 716,140 civilian inhabitants in 1917, records 844, and more than half the deaths in Portsmouth (175) were returned for the first week of the series. It is obvious that a careful study of the case incidence should be made, and although this will be impracticable for the civilian population as a whole, a good deal of light will be thrown upon the subject by an analysis of the records of such military organizations as the Royal Air Force, which has maintained establishments in all parts of the United Kingdom, and under conditions which do not deviate so widely from those of the civilian population as to render deductions of merely specialized value.

A point of especial interest is whether the heavy death-rate at younger ages, to which Dr. Stevenson drew attention in the discussion at the Royal Society of Medicine, and which has been noted by other writers, is a resultant of a relatively higher incidence or only of a higher fatality rate.

STANDARD ILLUMINATION IN VISION TESTING.

THE Council of British Ophthalmologists appointed last year a committee to determine standards of illumination for Snellen's test types for distant vision. The committee consisted of Sir George Berry (chairman), Sir Richard Glazebrook, C.B., F.R.S. (Director of the National Physical Laboratory), Mr. C. C. Paterson, O.B.E. (National Physical Laboratory), Mr. Leon Gaster (Secretary of the Society of Illuminating Engineers), Mr. J. Herbert Fisher, Colonel J. Herbert Parsons, Mr. A. B. Cridland, and Mr. W. H. MacMullen, O.B.E. (secretary), and its report[1] is as follows:

The effect upon visual acuity of variations in the illumination of test objects has been the subject of a series of careful investigations since the time of Tobias Mayer (1754). Two chief facts emerge from these researches: (1) That there is a rapid rise in acuity as the illumination is increased from zero up to about two foot candles[2]; (2) that above two or three foot candles there is scarcely any appreciable rise in acuity. The results obtained by different observers are not entirely concordant, the discrepancies being attributable to variations in the test object, contrast, size of pupil, etc. So far as the testing of visual acuity for clinical purposes is concerned, it appears to be sufficiently accurate to regard the results obtained with an illumination of three foot candles or more as valid and comparable under the ordinary conditions of clinical testing.

There is, however, no doubt that this minimum is by no means always ensured under the actual conditions in which the testing of candidates for military or other public services occurs. Apart from the fact, which should be borne in mind, that the test types often do not conform to Snellen's criteria, they are frequently dirty, thus diminishing contrast, are varnished, thus giving rise to disturbing direct reflection of light, and are viewed under very great variations of daylight, in rooms which are often ill suited for the purpose.

It is possible to lay down precise and simple rules for the efficient illumination of test types, and we see no reason why these rules should not be generally adopted. For the public services it is in our opinion unfair to the candidates and detrimental to the services themselves that the examinations should take place under unsatisfactory, and often hurriedly improvised, conditions. The testing of visual capacity is now an essential part of the physical examination of candidates for a large number of the public services, such as the navy, the army, the mercantile marine, the Indian Civil Service, and so on. We are of opinion that these tests should be conducted under approved conditions, and that this object would be best attained if the examinations were held at properly equipped centres.

We fully recognize that variations of visual acuity arise from many causes other than the actual illumination of the test types, such as the condition of retinal adaptation, contrast between the test object and its background, the size of the pupil, lateral illumination, and so on. We think, however, that these effects can be minimized sufficiently for practical clinical purposes if the testing takes place in a moderately well illuminated room, with the test types efficiently lighted, and with the careful elimination of any glaring lights or bright objects from the candidate's field of vision.

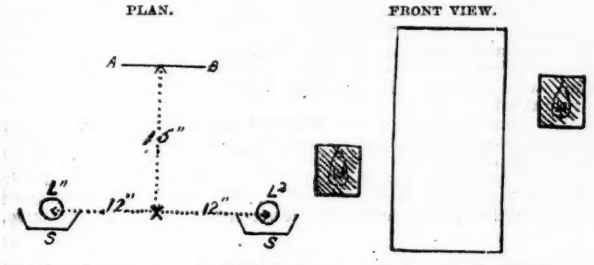
[1] Report on Standard Illumination of Snellen's Types Used in Testing the Vision of Candidates for Public Services. Published for the Council of British Ophthalmologists by G. Pulman and Sons, Ltd. (Price 6d.)

[2] One foot candle is the illumination received from a source of one candle power falling perpendicularly on a surface at a distance of one foot from the source.

We consider that the requirements are sufficiently well satisfied by the following means:

Two ordinary 20 watt tungsten lamps with straight filaments are fixed vertically 15 in. in front of the plane of the test card, one on each side, at a horizontal distance of 12 in. from the vertical plane normal to and bisecting the card. One lamp is placed higher than the other, one being opposite the junction of the upper and middle thirds of the card, the other opposite the junction of the middle and lower thirds. Opaque non-reflecting screens are fitted, so as to prevent direct light from the lamps reaching the candidate's eyes.

The accompanying diagrams illustrate the arrangement recommended.



A, B = Test card. L", L² = Lamps. S, S = Screens lined with matt black.

This method ensures:

1. Sufficient illumination. With new lamps the illumination on the test types will be of the order of 10 foot candles. The ordinary variations of current, deterioration of lamps, and the darkening of the test card with age will not reduce the brightness of the test card so illuminated to a value less than that of a perfectly white surface receiving an illumination of 3 foot candles.

2. Sufficient uniformity of illumination. Whilst we are aware that the same result can be achieved by the employment of properly designed and carefully placed reflectors, we have had to recognize in making these proposals that the testing of visual acuity must often be carried out in circumstances which do not admit of the use of special lighting arrangements, requiring technical skill in their installation or upkeep. We have therefore endeavoured to prescribe a method of ensuring the necessary illumination which is simple to erect, is not liable to become deranged by subsequent treatment, and which enables ordinary lamps on the market to be employed. Where electric light is not available a similar arrangement can be installed, using other illuminants (see appendix).

There is no theoretical objection to the use of diffuse daylight so long as the illumination on the test types is adequate, that is, does not fall below 3 foot candles. In cases of doubt, it would be necessary to apply tests requiring the skilled use of some form of photometer. We are therefore of opinion that, in order to secure uniformity and comparable results, artificial illumination should in general be used, and invariably in testing for the public services.

We therefore make the following recommendations:

I. *The Test Types.*—The test types shall be of the dimensions laid down by Snellen, and printed on a matt white surface.

II. *Illumination.*—

a. The minimum illumination on the test card shall be such that its brightness shall be equivalent to that of a new card illuminated to at least 3 foot candles;

b. The illumination of the test types shall be as uniform as possible;

c. Artificial illumination shall be used in preference to daylight;

d. The testing room shall be moderately illuminated, and care shall be taken that there are no glaring lights or bright objects in the candidate's field of vision;

e. Extreme contrast between the illuminated test card and the background shall be avoided.

III. *Method of Lighting.*—

a. The method of lighting described in this report shall be in general adopted;

b. This method shall be made compulsory for sight testing in all public services.

APPENDIX.

ILLUMINATION OF TEST TYPES BY GAS OR OIL LAMPS.

Gas Lighting.—Two "medium" inverted incandescent burners, consuming 2½ to 2¾ cub. ft. of gas per hour, are fixed 2½ ft. in front of the test card, one on each side, at a horizontal distance of 12 in. from the vertical plane, normal to and bisecting the card. One burner should be higher than the other, one being opposite the junction of the upper and middle thirds of the card, the other opposite the junction of the middle and lower thirds. Burners should be equipped with clear glass globes, and care should be taken to ensure, by regular maintenance, that mantles and burners are kept in good order and in clean condition. Opaque non-reflecting screens are fitted so as to prevent direct light from the burners reaching the candidate's eyes.

Oil Lighting.—Two standard "Duplex" oil lamps, each having a double straight wick, 1 in. in width and a chimney 10½ in. in length, are fixed 2 ft. in front of the test card, one on each side, at a horizontal distance of 12 in. from the vertical plane, normal to and bisecting the card. One lamp should be higher than the other, one being opposite the junction of the upper and middle thirds of the card, the other opposite the junction of the middle and lower thirds. The wick should be turned up as high as is possible without smoking, and the face of the wick should be turned towards the card. The distance from top of wick to level of oil in reservoir should not exceed 5 in. The lamp should be lighted twenty minutes before the test, so as to ensure steady conditions of burning. Opaque non-reflecting screens are fitted, so as to prevent direct light from the lamps reaching the candidate's eyes.

THE GENERAL ELECTION.

MEDICAL MEMBERS.

THE following list contains, we believe, the names of all medical men elected to the new Parliament. They number 16. The university contests being of special interest to the profession fuller particulars are given:

UNIVERSITIES.

Oxford.

Lord Hugh Cecil (Co.U.)	2,771
R. E. Prothero (Co.U.)	2,546
Professor Gilbert Murray (L.)	812
H. S. Furniss (Lab.)	351

The representation is unchanged. Lord Hugh Cecil has sat for the university since 1910, and Mr. R. E. Prothero, President of the Board of Agriculture, since 1916. Professor Gilbert Murray has held the chair of Greek at Oxford since 1908, and Mr. Furniss is Principal of Ruskin College, Oxford.

Cambridge.

J. F. P. Rawlinson (Co.U.)	2,034
Sir Joseph Larmor (Co.U.)	1,986
W. C. D. Whetham (Ind.)	1,229
J. C. Squire (Lab.)	641

Here again there is no change. Mr. Rawlinson, who has represented the university since 1906, is a commissary and deputy high steward of the university and recorder of the borough of Cambridge. Sir Joseph Larmor, F.R.S., was senior wrangler in 1880, and has been Lucasian professor since 1903. He was first elected to represent the university in Parliament in 1911. Mr. W. C. Dampier Whetham, F.R.S., was Coutts Trotter student for original research in natural science, and Clerk Maxwell student in experimental physics. He is a well known writer on social subjects. Mr. Squire is editor of the *New Statesman*.

London.

Sir Philip Magnus (Co.U.)	2,810
Sidney Webb (Lab.)	2,141
A. A. Somerville (Teachers)	885
Sir W. Herringham (Ind.)	715
C. L. Nordon (Ind.)	210

Sir Philip Magnus has represented the university since 1906. Mr. Sidney Webb was one of the authors of the minority report of the Poor Law Commission, and took part in the foundation of the London School of Economics and Political Science. Sir Wilmot Herringham is physician to St. Bartholomew's Hospital and Major-General in the Army Medical Service. Mr. Nordon is a solicitor, and has served in the army during the war.

Combined English.

H. A. L. Fisher (Co.L.)	959
Sir Martin Conway (Co.U.)	777
J. A. Hobson (Ind.)	481
H. G. Williams (U.)	410

Mr. Fisher and Sir Martin Conway are the first members for the combined English universities; the former is President of the Board of Education and the latter a mountaineer and writer on art. Mr. J. A. Hobson is a writer on industrial subjects, and Mr. H. G. Williams is an engineer.

Wales.

H. Lewis (Co.L.)	739
Hon. Mrs. Mackenzie (Lab.)	176

Mr. Lewis has been Parliamentary Secretary to the Board of Education since May, 1915, and was previously Parliamentary Secretary to the Local Government Board and a Liberal Whip.

Scotland.

Sir Watson Cheyne (Co.U.)	3,719
D. M. Cowan (Co.L.)	3,499
Sir Henry Craik (Co.U.)	3,286
Dr. P. Macdonald (Lab.)...	1,581
Prof. W. R. Smith (Ind.)	850

For the combined Scottish university constituency, with three seats, the two old members, Sir Watson Cheyne, and Sir Henry Craik, have been re-elected, together with Mr. D. M. Cowan, M.A., a schoolmaster, who has been at the head of a large primary and secondary school. Dr. Peter Macdonald is an ophthalmic surgeon in York whose views on the future of medicine are well known to our readers through his writings in our columns. Professor W. R. Smith holds the chair of Forensic Medicine and Toxicology in King's College, London, and is this year one of the Sheriffs of the City of London.

Dublin.

A. W. Samuels (U.)	1,273
Sir R. Woods (Ind.)...	793
Wm. Jellett (U.)...	631
Captain S. L. Gwynn (N.)	257

Sir Robert Woods, who graduated M.B., B.Ch.Dublin in 1889, is Professor of Laryngology and Otology in Trinity College, Dublin, and was president of the Royal College of Surgeons in Ireland in 1910–12. Mr. Samuels is Attorney-General for Ireland.

National University of Ireland.

J. MacNeill (S.F.)	1,644
Professor A. W. Conway (N.)	813

Mr. MacNeill was Professor of Irish in the National University and was president of the Sinn Fein organization at the time of the Easter rebellion.

Queen's University, Belfast.

Sir W. Whitla (U.)	1,487
S. Dolan (S.F.)	118

Sir William Whitla is Professor of Materia Medica and Therapeutics and Senior Physician to the Royal Victoria Hospital, Belfast. He is well known to members of the British Medical Association, having been President at the annual meeting held in Belfast in 1909.

COUNTIES AND BOROUGHS.

England and Wales.

Member.	Constituency.	Politics.	Majority.
Dr. Christopher Addison ...	Shoreditch ...	Co.L.	6,118
Major A. C. Farquharson, R.A.M.C.(T.)	Leeds, North ...	Co.L.	10,440
Sir Auckland Geddes ...	Basingstoke, Hants	Co.U.	4,941
Dr. B. F. P. McDonald ...	Wallasey	Co.U.	10,249
Major J. E. Molson, R.A.M.C.(T.F.)	Gainsborough ...	Co U.	2,078
Lieut.-Col. Nathan Raw, C.M.G. R.A.M.C.	Wavertree, Liverpool	Co.U.	6,223

Dr. Christopher Addison, who was lecturer in anatomy in the medical school of St. Bartholomew's Hospital when he entered Parliament for the Hoxton Division of Shoreditch in 1910, became Parliamentary Secretary to the Board of Education in August, 1914. When the Ministry of Munitions was established in the following year he became its Parliamentary Secretary, and succeeded Mr. Lloyd George as Minister at the end of 1916. In 1917 he became Minister of Reconstruction, and in that capacity introduced the Ministries of Health Bill at the end of last session.

Major A. C. Farquharson graduated M.B., C.M.Glasg. in 1889, and M.D. in 1891; he has held various public medical appointments in the Auckland district of co. Durham. He is also a barrister-at-law. He is a member of the Council of the British Medical Association. At the outbreak of war he was a captain in the R.A.M.C. Territorial Force, and one of the medical officers to the 6th Battalion Durham Light Infantry. In 1915 he was appointed to the head quarter staff of the 63rd Division, and a year later became deputy assistant director of medical services on the staff of the D.D.M.S., Northern Command.

Sir Auckland Geddes, one of the many distinguished anatomists the Edinburgh school has given to other universities, is professor of anatomy, McGill University, Montreal. He had served in the South African war as a lieutenant in the 3rd Highland Light Infantry, and at the outbreak of war came to this country to serve again. He was Director of Recruiting at the War Office from 1916 to 1917, when he became Minister of National Service. He is now President of the Local Government Board.

Dr. Bouverie F. P. McDonald graduated M.B., C.M.Edin. in 1884, and M.D. in 1886. He is in practice in New Brighton on the Mersey, and is a county councillor and J.P. for Cheshire. He has taken a very active part in local war work in Wirral, and served on the recruiting committee of Wallasey, the constituency for which he now sits.

Major J. E. Molson graduated M.B., B.C.Camb. in 1891 and M.D. in 1905. He holds a commission as Major in the R.A.M.C. Territorial Force. He had retired from practice before the war.

Lieut.-Colonel Nathan Raw, C.M.G., graduated M.B., B.S. Durh. in 1888, and M.D. in 1891. He has been physician to the Mill Road Infirmary, Liverpool, since 1897, and is a member of the International Committee for the Prevention of Tuberculosis. He has been O.C. of No. 6 British Red Cross (Liverpool Merchants) Hospital in France.

Scotland.

Member.	Constituency.	Politics.	Majority.
Captain W. E. Elliot, M.C., R.A.M.C.(S.R.).	Lanark	Co.U.	7,155
Dr. Donald Murray... ..	Western Isles ...	L.	390

Captain Walter E. Elliot graduated M.B., Ch.B.Glas. in 1913. He held a commission in the R.A.M.C. Special Reserve and was attached to the Scots Greys. He was wounded in France and was awarded the Military Cross as well as a French decoration.

The constituency of the Western Isles, which Dr. Donald Murray has been elected to represent, includes the Lews, Harris, and North and South Uist. He was born in Stornoway, where he now resides, and graduated M.B., C.M.Glas. in 1890. He is M.O.H. for Lewis and Stornoway, and medical inspector of school children for Lewis and the western portion of Ross-shire.

Ireland.

Member.	Constituency.	Politics.	Majority.
Dr. John Crowley	Mayo, North ...	S.F.	5 668
Dr. B. A. Cusack	Galway, North ...	S.F.	4,897
Dr. Richard Hayes	Limerick, East ...	S.F.	9,142
Dr. Patrick McCartan ...	King's County ...	S.F.	unopposed
Dr. James Ryan	Wexford South ...	S.F.	518

Dr. John Crowley is medical officer of the Ballycastle Dispensary District, co. Mayo.

Dr. B. A. Cusack, medical officer of the Turloughmore Dispensary District, co. Galway, is, we are informed, at present interned in Birmingham. He is a brother of Dr. P. J. Cusack, the defeated Irish parliamentary candidate for North Meath.

Dr. Richard Hayes was Poor Law medical officer of the Lusk Dispensary District, co. Dublin. For his part in the rebellion he was sentenced to twenty years' penal servitude. He is at present, we are informed interned in England.

Dr. P. McCartan was Poor Law medical officer in the county Tyrone, and is, we are informed, at present in America.

Dr. James Ryan only recently qualified, and is engaged in private practice in the town of Wexford.

NEW YEAR HONOURS.

CERTAIN New Year honours were announced on New Year's day in the *London Gazette*, but further lists will appear later, including what is commonly called the Prime Minister's list. The lists so far issued refer to services rendered in the Royal Navy, in the army in France and Flanders and in India. Certain civil honours are also announced. We are this week only able to publish the first part of the lists already issued.

ROYAL NAVY.

The following honours have been granted in recognition of valuable services rendered during the war:

K.C.M.G.

Surgeon Rear-Admiral George Welch, C.B.

C.B.

Surgeon Captain Walter Godfrey Axford, R.N.
Surgeon Captain Arthur Stanley Nance, R.N.

C.M.G.

Surgeon Commander Robert Dundonald Jameson, R.N.
Surgeon Commander Hugh Somerville Burniston, R.N.

D.S.O.

Surgeon Lieut. Commander H. D. Drennan, R.N.

C.B.E.

Surgeon Captain George Thomas Broach, R.N.
Surgeon Captain Vidal Gunson Thorpe, R.N.

O.B.E.

Surgeon Commander Richard Francis Bate, R.N.
Surgeon Commander Robert Hardie, R.N.
Surgeon Commander (acting Surgeon Captain) Herbert Lloyd Penny, R.N.
Surgeon Commander Ernest Albert Shaw, R.N.
Surgeon Lieut. Commander Leslie Miles Morris, R.N.
Surgeon Lieutenant Arthur Ernest Iles, R.N.

ARMY (*France and Flanders*).

The following honours have been conferred for valuable services rendered in France and Flanders:

K.C.B.

Major-General (temporary Lieut.-General) Charles Henry Burtchaell, C.B., C.M.G., K.H.S., A.M.S.

C.B.

Major-General Richard Cleveland Munday, R.A.F., Medical Branch.
Colonel Theophilus Percy Jones, C.M.G., A.M.S.
Colonel Charles Augustus Young, C.M.G., A.M.S.
Temporary Colonel Hamilton Ashley Ballance, A.M.S.
Temporary Colonel Andrew Fullerton, C.M.G., A.M.S.

C.M.G.

Colonel James Adam Dick, A.A.M.C.
Colonel Donald Johnstone McGavin, D.S.O., N.Z.M.C.
Colonel John Poe, D.S.O., A.M.S.
Colonel Robert Percy Wright, D.S.O., C.A.M.C.
Temporary Colonel (Major R.A.M.C.(T.F.)) George Ernest Gask, D.S.O., A.M.S.
Temporary Colonel John Alexander Nixon, A.M.S.
Temporary Colonel (Lieut.-Colonel R.A.M.C.(T.F.)) William Errington Hume, A.M.S.
Lieut.-Colonel Spurgeon Campbell, C.A.M.C.
Lieut.-Colonel William Kitson Clayton, T.D., R.A.M.C.(T.F.).
Lieut.-Colonel John Franklin Kidd, C.A.M.C.
Lieut.-Colonel (temporary Colonel) Alexander James MacDougall, R.A.M.C.
Lieut.-Colonel (temporary Colonel) Henry Graham Martin, R.A.M.C.
Lieut.-Colonel Charles James Martin, F.R.S., A.A.M.C.
Lieut.-Colonel (temporary Colonel) Standish de Courcy O'Grady, D.S.O., R.A.M.C.
Lieut.-Colonel (temporary Colonel) Henry Herrick, D.S.O., R.A.M.C.
Lieut.-Colonel (temporary Colonel) Horace Samson Roch, D.S.O., R.A.M.C.
Lieut.-Colonel Donald Norman Watson Murray, D.S.O., N.Z.M.C.
Temporary honorary Lieut.-Colonel Hugh Cabot, R.A.M.C.
Temporary Major (acting Lieut.-Colonel) Joseph Dalrymple, O.B.E., R.A.M.C.

D.S.O.

Lieut.-Colonel (temporary Colonel) Farquhar McLennan, R.A.M.C.
Lieut.-Colonel Roy William Chambers, 11th Field Ambulance, A.A.M.C.
Lieut.-Colonel George Craig, No. 1 New Zealand Field Ambulance, N.Z.M.C.
Lieut.-Colonel William Edward Lodewyk H. Crowther, 5th Field Ambulance, A.A.M.C.
Lieut.-Colonel George William Macartney, 10th Field Ambulance, A.A.M.C.
Temporary Lieut.-Colonel Charles Walter Vipond, 9th Field Ambulance, C.A.M.C.
Major (temporary Lieut.-Colonel) Edmund Frank Lind, 2nd Field Ambulance, A.A.M.C.
Major (acting Lieut.-Colonel) Alexander Callam, R.A.M.C. (T.F.), attached 1/1st (East Lancashire) Field Ambulance.
Major (acting Lieut.-Colonel) Edward Harvie Cox, 2/3rd (East Lancashire) Field Ambulance, R.A.M.C.(T.F.).
Major (acting Lieut.-Colonel) Clive Thornley Edmunds, 57th Field Ambulance, R.A.M.C.
Major (acting Lieut.-Colonel) William Henry Forsyth, 38th Field Ambulance, R.A.M.C.
Major (acting Lieut.-Colonel) Stuart Gerald McAllum, R.A.M.C.(S.R.), attached 140th Field Ambulance.
Major (acting Lieut.-Colonel) Thomas Trevor Hull Robinson, R.A.M.C., No. 5 Field Ambulance.
Major (acting Lieut.-Colonel) John Hector Stephen, 89th (Highland) 1/1st Field Ambulance, R.A.M.C.(T.F.).
Major (acting Lieut.-Colonel) James Henry Wood, 2nd Field Ambulance, C.A.M.C.
Major Archibald McKillop, 1st Field Ambulance, A.A.M.C.
Major Claude Morlet, 13th Field Ambulance, R.A.M.C.
Major William Alexander Morton, A.A.M.C., attached 3rd Brigade Australian Field Artillery.
Major Vincent Wellesley Savage, 3rd Field Ambulance, A.A.M.C.
Major William Campbell Sawers, 14th Field Ambulance, A.A.M.C.
Captain (temporary Lieut.-Colonel) James Barkley, R.A.M.C. (T.F.), attached 2/3rd (Home Counties) Field Ambulance, R.A.M.C.(T.F.).
Captain (temporary Lieut.-Colonel) Charles William Eames, R.A.M.C.(T.F.), attached 2/2nd (West Riding) Field Ambulance.
Captain (acting Lieut.-Colonel) Robert Burgess, M.C., R.A.M.C.(T.F.), attached 24th (1/1st Wessex) Field Ambulance,
Captain (acting Lieut.-Colonel) Lee Danby Buxton Cogan, 88th Field Ambulance R.A.M.C.(T.F.)
Captain (acting Lieut.-Colonel) Francis George Dobson, R.A.M.C.(T.F.), attached 1/2nd (West Riding) Field Ambulance.
Captain (acting Lieut.-Colonel) Cyril James Anthony Griffin, R.A.M.C.(S.R.), attached 5th Cavalry Field Ambulance.
Captain (acting Lieut.-Colonel) Cyril Helm, M.C., 42nd Field Ambulance, R.A.M.C.
Captain (acting Lieut.-Colonel) Charles Llewellyn Lander, M.C., R.A.M.C.(T.F.), attached 2/3rd (S.M.) Field Ambulance, R.A.M.C.(T.F.).
Captain (acting Lieut.-Colonel) John MacMillan, M.C., R.A.M.C., attached 5th (London) Field Ambulance, R.A.M.C. (T.F.).
Captain (acting Lieut.-Colonel) Charles Max Page, R.A.M.C. (S.R.), attached 90th Field Ambulance.
Captain (acting Lieut.-Colonel) James Young, 1/3rd (Lowland) Field Ambulance, R.A.M.C.(T.F.).
Captain (acting Major) Thomas Ingram Dun, M.C., R.A.M.C.
Temporary Captain (acting Major) Alexander Edmond Knight, M.C., R.A.M.C.
Temporary Captain (acting Major) Montgomery Paterson Paton, M.C., R.A.M.C.

INDIA.

The following honours are conferred in recognition of services rendered in India:

C.I.E.

Lieut.-Colonel John Telfer Calvert, I.M.S., Principal, Medical College, Calcutta.
Major John Hanna Murray, I.M.S., Andaman Islands.
Lieut.-Colonel Francis Edward Swinton, I.M.S., Medical Storekeeper, Bombay.
Lieut.-Colonel John Charles Lamont, I.M.S.(ret.), Professor of Anatomy, Medical College, Lahore.

CIVIL.

Among the civil honours conferred are the following:

K.C.V.O.

Sir George Anderson Critchett, Bt., C.V.O.

Knighthoods.

Dr. William Leslie Mackenzie, Medical Member of the Local Government Board for Scotland.
Mr. G. Dancer Thane, LL.D., F.R.C.S., Principal Inspector under Cruelty to Animals Act, Home Office.

C.B.

Dr. Robert Bruce Low, Assistant Medical Officer, Local Government Board (retired).

COLONIAL OFFICE LIST.

Knight Bachelor.

Lieut.-Colonel John Hewat, M.B., Member of the House of Assembly of the Union of South Africa and Assistant Director of Medical Services of the Union.

Medico-Legal.

AN UNREGISTERED PRACTITIONER.

AT the Bromley police court, on December 19th and 23rd, 1918, James Allan pleaded guilty to a charge of practising as a medical man without being registered. A second charge of unlawfully signing a death certificate was not proceeded with in view of the plea of guilty to the first charge. Sir Archibald Bodkin, who appeared for the Director of Public Prosecutions, said that there was a James Allan, who in 1892 obtained the M.B. and C.M. degrees at Edinburgh University. He died in 1898 and his name was erased from the *Medical Register*, and that name with those degrees never again appeared therein. In the unofficial publication called the *Medical Directory*, however, there appeared from 1901 onwards the name of James Allan, M.B., C.M.Ed. The form sent out by the publishers of the directory for the 1919 edition was returned with the addition after the defendant's name of the letters O.B.E. This distinction, which had been conferred on James Allan, appeared in the newspapers, and was seen by the acting registrar of the General Medical Council, who looked at the official publication, and found that no such practitioner was registered therein. Accordingly he communicated with the Scottish branch registrar, and communications were addressed to James Allan. In consequence of the replies the registrar in London communicated with the solicitor to the Council, and the matter came before the Director of Public Prosecutions. As the result of inquiries by the police it was found that the defendant was the son of an Irish farmer, who went to Glasgow at the age of 18, and, after being a shop assistant for a time, studied medicine; afterwards he went as assistant to doctors and then practised at Chislehurst as a medical man. Owing to his energy in connexion with local Red Cross hospitals he received the distinction of O.B.E. Lord Chilston, Director of the Kent V.A.D., in giving evidence as to the defendant's character, praised his work at the Chislehurst Red Cross Hospital; and the Rector of Chislehurst said that Allan attended his household for sixteen years with skill and success. Mr. Tree, who appeared for the defendant, pleaded that he had been guilty of a technical offence, but had done nothing to the danger of the public; owing to a stupid blunder twenty years ago as a young man he had not qualified. The Bench imposed the maximum penalty of £20, with ten guineas cost.

British Medical Journal.

SATURDAY, JANUARY 4TH, 1919.

THE WONDERFUL YEARS.

The most wonderful year was 1914, when the nations vowed to themselves and to each other to fight for their heritage of the spirit. The year 1918 was wonderful also for the material victory by which the vow of the spirit was accomplished.

It is not easy to-day to go back to the frame of mind in which we were a year ago. The outlook was dark; we and our Allies were holding grimly on and were greatly comforted by the resolve of America, which had begun to land troops in France at the end of June, 1917, but no man ventured to foretell when the arch-enemy, Germany, would be beaten to her knees. We had then recently been distressed by the Italian defeat at the end of October, and cheered by their stand a fortnight later made with the aid and encouragement of British and French troops; we had witnessed the dearly bought victory of Passchendaele, we had rejoiced for a moment in the rapid advance at Cambrai which seemed to presage the end of trench warfare, and imagination had been impressed by the capture of Jerusalem (December 9th). But we had witnessed also the Bolshevist *coup d'état* in Russia, the armistice with Germany on that front, and the Brest conference just before Christmas, which no one doubted marked the final abandonment of our cause by Russia. But darker days were in store when, in March, came the immediate success of the German offensive, and its armies were again on the Marne, again forcing on towards Paris, and again in sight of the Channel from Kemmel Hill. The third Military Service Act showed how close we had got to our limit of man power, and the best news was the determination of America immediately to send a great army to France. At the end of June we knew of the defeat of the Austrians in Italy, at the beginning of July that a million American soldiers had been shipped to France, at the end of July that Foch's great counter-attack was succeeding, and in early September that the Drocourt—Quéant line was breached. At the end of September the surrender of Bulgaria withdrew the first stone from the arch that sustained the Central Powers; at the end of October Austria and Turkey sued for peace, and then came the last events—the flight of the Kaiser from his empire on November 10th and the acceptance of the Allies' armistice terms by Germany on November 11th.

All through the four and a half years, the 1,560 days of the war, no class of the community in this country was tried higher than the medical profession, and it can look back with satisfaction on the work it has done and the way in which it organized to meet the emergency. The British Medical Association stands to be shot at, but it has not, we venture to assert, had the credit it deserves for its initiative in the autumn of 1914, which resulted in the establishment of the professional committees for the organization of medical effort in the war. The first move was made by the Chairman of the Scottish Committee of the British Medical Association, the late Dr. Hamilton of Hawick, and his suggestion was at once taken up by the colleges and universities in Scotland. Through this co-operation a strong and very representative committee was formed, which has rendered most valuable services to the medical profession in Scotland, and to the navy and army. In England and Wales similar work was undertaken by the Chairmen's Committee of the Council of the British Medical Association, and carried on until, at the next ensuing Annual Representative Meeting (July, 1915), formal steps could be taken to establish a joint committee with other professional bodies. The members nominated by the Association numbered 16, and power was given to co-opt 6 representatives of universities, colleges, and other medical bodies. The committee was instructed "to organize the medical profession in England, Wales, and Ireland in such a way as will enable the Government to use every medical practitioner fit to serve the country in such a manner as to turn his qualifications to the best possible use, and to deal with all matters affecting the medical profession arising in connexion with the war." The Central Medical War Committee thus established worked very hard in the ensuing months, and, we venture to say, very well. Its scheme of enrolment, put out early in December, 1915, was recognized by the Army Council, which on January 12th, 1916, stated that no qualified medical practitioner willing to accept, if offered, a commission in the R.A.M.C., would be accepted as an ordinary combatant, and undertook to recognize the certificate of enrolment of the Central Medical War Committee. The Scottish Medical Service Emergency Committee was placed in the same position. Arrangements were thus well in hand when the first Military Service Act (1916) received the Royal assent on January 27th. That Act applied to members of the medical profession who were single and under 41 years of age, but by the Army Council decision noted above it remained with the professional committees to call upon them for service in the R.A.M.C. if and when they were required.

In March, 1916, at the suggestion of the Marylebone Medical War Committee, through the Central Medical War Committee, the Royal Colleges in London appointed a Reference Committee "to give advice to the Government in relation to medical practitioners in the metropolitan district required for service in the army, and also to advise on cases of special difficulty elsewhere in England and Wales." The second Military Service Act of 1916, which received the Royal assent on May 25th, rendered all men under 41, including medical men, liable to compulsory service, but it provided that if a medical man produced the certificate of enrolment the recruiting authority would refrain from further action. The Act directed the establishment of professional committees to deal with claims for exemption made in respect of duly qualified medical practitioners, and the decision of such committees was to be binding on tribunals. On June 7th, before the Act came into force, the Army Council recognized the Central Medical War Committee for England and Wales and the Scottish Medical Service Emergency Committee as the central professional committees, and the Reference Committee of the Royal Colleges as the central committee in respect of members of hospitals or medical schools in London, and, in certain circumstances, of staffs of other hospitals.

The work of the committees during the next two years continued on the lines thus laid down; it involved frequent meetings and a laborious investigation of the medical conditions in every district of the country. The strain upon the man power of the country in the winter of 1917–18 had forced the conclusion that a more drastic combing out was needed,

and the victorious German advance at the end of March led to immediate action in Parliament by the passing of the third Military Service Act (April, 1918). It made every man born in Great Britain aged not more than 51 liable to military service, but for medical men extended the liability to 56. The procedure evolved in the previous three years by the professional committees and tested during two, was applied again, although, in place of the certificate of enrolment issued by the professional committees, a "certificate of protection" was instituted by the Ministry of National Service, which, however, acted throughout on the advice of the professional committees. The condition attached to the certificate made the practitioner, if not required for medical service with the armed forces, liable to undertake such professional service as the Ministry of National Service, after consultation with the medical tribunals, might from time to time deem best in the national interests. So far as we are aware, it has not been necessary to make use of this compulsory power, and the fact is a tribute to the patriotism and reasonableness of the profession.

We cannot leave this short sketch of the origin and the work of the professional committees without complimenting them upon the wisdom of their policy, which made it possible for the medical profession to retain the management of affairs in its own hands. We may be permitted to pay a special tribute to the services of Dr. T. Jenner Verrall, chairman of the Central Medical War Committee; of Dr. Charles Buttar, chairman of its Executive Committee; of Dr. T. W. Shore, who became the chairman of a subcommittee appointed later on to make local arrangements, a committee which had a difficult and thankless task; and of the two secretaries, Mr. Bishop Harman and Dr. Alfred Cox. Finally, all will recognize that the profession in Scotland owes very much to Dr. Norman Walker, the convener of the Scottish Medical Service Emergency Committee.

MEDICAL RESETTLEMENT.

WRITING on the subject of medical demobilization in the JOURNAL of December 14th, we tried to show that the central professional committees are conscious that their duty towards doctors returning from the forces to civilian practice does not end with the release of medical officers in accordance with the scheme of priority which has been drawn up. There is the further task of assisting those who have served their country to re-establish themselves in professional life, and the committees regard it as a duty and a privilege to protect the interests and promote the welfare of all doctors who leave the forces. The Government department through which the demobilization of civilian medical practitioners serving in the Navy, Army, or Air Force will be arranged is the Ministry of National Service, but that Ministry has no concern with the cognate problem of resettlement. In this respect the medical profession would appear to be worse off than other professions, trades, and industries, the return of whose members to civil employment is watched over by the Demobilization and Resettlement Department of the Ministry of Labour. The attitude of that department towards the work which lies before it is shown by the following extract from the preface to a *Guide to Employers and Employed*, which was issued a fortnight ago: "Millions of men and women have to be placed in employment. Their qualifications, like their needs, are of an extraordinarily diverse character, and the task of fitting them into the fabric of national life on a peace basis can be satisfactorily performed only if there exists cordial co-operation between all parties concerned. Resettlement, indeed, is a national affair."

It would seem from the published announcements that the Government has accepted responsibility for the resettlement of "all classes of fighting men and all classes of war workers," and that this will be done for the most part through the Employment Exchanges and their local advisory committees, which are meant to form a link between those who want work and those who want workers. These industrial agencies, however, can scarcely be expected to afford much help to professional men. It seems probable that the Appointments Department of the Ministry of Labour may be persuaded to interest itself in certain aspects of medical resettlement, and to co-operate with the professional committees acting in concert with the various benevolent and relief funds when questions of financial aid arise.

As we announced last week in the SUPPLEMENT, the possibility of making loans or grants to returning medical officers who are in financial straits was discussed on December 17th at a conference between members of the Central Medical War Committee and representatives of the Committee of Reference, the War Emergency Fund of the Royal Medical Benevolent Fund, the Officers' Families Fund, the Professional Classes War Relief Council, and the National Relief Fund. We take it as a good omen that a representative also attended from the Appointments Department of the Ministry of Labour. Medical demobilization, as has been said, is being arranged through the Ministry of National Service, but the days of that department appear to be numbered, and resettlement does not come within its range of action.

Besides the funds mentioned above there would appear to be another source from which demobilized medical officers might seek monetary aid whilst endeavouring to re-establish themselves in practice. We refer to the Military Service (Civil Liabilities) Committee, which is empowered to make grants from public funds to meet certain financial obligations.[1] Stated briefly, such grants may be given to officers not above the rank of captain, and ordinarily resident in the United Kingdom before joining the forces, who cannot by reason of military service meet their financial obligations, and are thereby exposed to serious hardship. Such obligations are those arising in respect of rent, interest and instalments on loans and mortgages, taxes and rates, insurance premiums, school fees, and the maintenance of children; but aid is not granted for the discharge of ordinary debts. The Commissioners may require the production of full information, including receipts or other documents. It was originally stated that grants would not be made in respect of any period after the grantee ceased to belong to His Majesty's forces; but on November 12th last Dr. Addison announced on behalf of the Government that financial assistance subsequent to demobilization might be granted in accordance with a scheme based on the existing regulations of the Civil Liabilities Department. Thus aid might be given to any officer or man who was unable by reason of his military service to meet his financial obligations after demobilization, and was thereby exposed to serious hardship.

A further step taken by the Central Medical War Committee on behalf of home-coming doctors has been to urge the War Office, the Ministry of Pensions, the Local Government Board, and the Ministry of National Service to give preference to these men in distributing the large amount of medical work of a

[1] BRITISH MEDICAL JOURNAL, May 12th, 1917, p. 633.

military or national character that will soon be available throughout the country—such, for instance, as pensions examinations and the treatment of pensioners, additional work under the Education Act of 1918, attendance at venereal centres, and work in connexion with maternity and child welfare schemes. The Committee holds that the authorities concerned should without delay announce that such posts will be given to medical men returning from service, whose military experience has familiarized them with the kind of work to be done. Where these duties have been carried out by a rota of civilian doctors, the returning man should be added to the list as soon as he applies, and work should be allotted to him if he so desires. The Committee believes that these suggestions if accepted would go far to assist the returning men immediately after their release when help is most needed, and it has reason to hope that after the first few months the men who have practices to return to will find themselves almost as well off as before. The Local Medical War Committees have been invited to co-operate to the utmost in this line of action, with the same goodwill that they have shown in protecting the interests of the men on service during the past four and a half years. As a proof of their intention to help those who have risked and sacrificed so much, the local committees could use their influence with local military pensions and national service authorities to secure that doctors who have not served are replaced by those who now return, in every position where such exchange is possible. With regard to permanent appointments, it is clear that these ought not to be made by local authorities until demobilization is over—that is to say, until all medical men serving temporarily with the forces have had an opportunity of returning to civilian work. This contention gains much support from the recent acceptance by the Government of the principle that from the beginning of demobilization, and for a year after, permanent appointments in the civil service shall be reserved for ex-officers and ex-soldiers.

So far as we are aware, there is no ground for the belief, which seems to be rather widespread, that a large number of newly created whole-time medical posts will be available. It is probable that the only new appointments will be in connexion with pensions work and orthopaedic hospitals or kindred institutions, and the number of these posts is not expected to be large. But the expressed intentions of the Government with regard to maternity and child welfare, venereal diseases, and the treatment of school children and young persons under the new Education Act, foreshadow a considerable amount of part-time work which will be open to general practitioners. In gauging the capacity of the country to absorb general practitioners on their return from military service, it is well to bear in mind that the civil profession has been cut off from its supply of recruits for nearly five years, while the losses from death, ill health, and retirement from practice have gone on as usual.

NEW YEAR HONOURS.

THE list of honours which it is customary to grant on New Year's day is this year incomplete; in particular, what is called the Prime Minister's list has not been issued. The *London Gazette*, however, has announced honours granted in connexion with the war to officers of the Royal Navy, the Army, the Royal Air Force, and the Indian Services, and also certain civil honours. Lieut.-General Burtchaell receives the K.C.B. This distinguished officer, who entered the army in 1891 and saw service in India and during the South African war, has held responsible positions throughout the war in France; he succeeded Sir Arthur Sloggett as Director-General Medical Services, G.H.Q., France, last June. The honour of K.C.M.G. is conferred on Surgeon Rear-Admiral George Welch, who has seen much service at home and afloat, and was recently surgeon-general of the great naval hospital at Haslar. This recognition of Sir George Welch's great services will, we know, give pleasure to all the officers of his branch. The K.B.E. is conferred on Major-General Hickson, C.B., who served with distinction in South Africa and has done most important work during the present war. The same honour is conferred on Colonel Sir Almroth Wright, C.B., F.R.S., the author of the system of anti-typhoid inoculation, who has done such remarkable pathological work in his laboratory at Boulogne throughout the war. The K.C.V.O is conferred on Sir Anderson Critchett, Bt., Surgeon-Oculist to the King. The honour of knighthood is conferred on Dr. W. Leslie Mackenzie, who has achieved so influential a position as medical member of the Local Government Board for Scotland; on Professor G. D. Thane, who has long held the chair of anatomy at University College, London, and has been for some time principal inspector under the Cruelty to Animals Act; and on Lieut.-Colonel J. Hewat, M.B., M.P. Union of South Africa, and Assistant Director of Medical Services of the Union. The distinction of C.B. is conferred on the late Medical Administrator of the Royal Air Force, on Colonels T. P. Jones and C. A. Young, of the Army Medical Service, and on Colonel Hamilton Ballance of Norwich, and Colonel Andrew Fullerton, C.M.G., of Belfast, in recognition of their services as consulting surgeons with the military forces. A first instalment of the complete list of honours announced on New Year's day is published at page 14.

THE MEDICAL M.P.'S.

THE number of medical men elected to the new Parliament in Great Britain is, we believe, nine, as compared with five in the last Parliament. Dr. Christopher Addison and Sir Auckland Geddes have been re-elected; the new members are Major A. C. Farquharson (Leeds, N.), Dr. B. F. P. McDonald (Wallasey), Lieut.-Colonel Nathan Raw, R.A.M.C. (Liverpool, Wavertree), Captain W. E. Elliot, M.C., R.A.M.C.(S.R.), (Lanark), Major J. E. Molson, R.A.M.C.(T.) (Gainsborough). In Scotland Sir Watson Cheyne has been re-elected, and Dr. Donald Murray represents the Western Isles of Scotland, the Lews, Harris, and the Uists. Five medical members of the last Parliament will not sit in the new: Sir William Collins (Derby) and Sir Garrod Thomas (Monmouthshire, S.) have not been candidates at this election. Major W. A. Chapple (Clackmannan and Eastern Stirling), Mr. John Dillon (Mayo, E.), and Colonel A. Lynch, who at this election stood for Battersea, South, have been defeated. In Ireland seven medical men have been returned to Parliament; among these are the two university members, Sir William Whitla (Unionist) for the University of Belfast, and Sir R. Woods (Independent) for the University of Dublin. The other five all profess Sinn Fein politics, and of these two are interned, and one in America. The effective medical representation in the new Parliament would therefore appear to be 11 out of 707. Further particulars with regard to the election are given at p. 13.

THE UNIVERSITY MEMBERS.

UNIVERSITY graduates have on the whole made good use of the opportunity of voting in this election and have in this respect justified the addition which the Representation of the People Act, 1918, made to the number of university representatives in Parliament. Probably none of the registers were entirely complete, but there is reason to think that in some instances they were more complete than in others—that is to say, the proportion of those entitled to be on the register to those who actually reached it varied. This was probably due in part to dilatoriness on

the side of the university authorities and in part to the failure of graduates to take the trouble to see that their names were on the register. Taking the figures as they stand, it appears that of those entitled to vote the percentage that actually voted was 86 in the University of Wales, 82 at Oxford and in the Combined Universities in England, 79 at the Queen's University, Belfast, 68 in the University of London, 63 at Cambridge, and in the Scottish Universities 47. The percentage in all the university constituencies except the Scottish, is a good deal higher than that for the country generally, which was a fraction under 50, not counting the uncontested seats. The result of the university polls has been the return of three medical members, by the re-election of Sir Watson Cheyne at the head of the poll for the Scottish Universities, and by the election of Sir Robert Woods for the University of Dublin, and of Sir William Whitla for the Queen's University, Belfast, by a very large majority over his Sinn Fein opponent. So far as politics go, the distribution is very similar to that of the parties in the counties and boroughs. Eleven of the university members elected belong to the Coalition (8 Unionists and 3 Liberals), 2 are Unionists (Dublin and Belfast), 1 is an Independent (Dublin), and 1 Sinn Fein (National University of Ireland). Proportional representation by means of the single transferable vote, which applied to those universities with more than one seat, has not had very much effect on the result. In Edinburgh the quota to secure election was 3,234, and as three of the candidates—Sir Watson Cheyne, Mr. D. M. Cowan, and Sir Henry Craik—had obtained it, it was not necessary to carry the enumeration further. In the combined English universities the system had the effect of returning Sir Martin Conway; at the first count Mr. Fisher obtained 959, and was accordingly elected. Mr. Williams and Mr. Hobson had 366 each, and Sir M Conway 303. When Mr. Fisher's surplus votes were transferred they were found to give Sir Martin Conway 777 votes.

WAR CASUALTIES OF THE NATIONS.

ON December 26th, 1918, the French Under-Secretary of State for Pensions submitted to the Chamber a statement of French war losses up to November 1st, 1918. The total of dead, missing, and prisoners of war is 42,600 officers, 1,789,000 other ranks. The dead number 31,300 officers and 1,040,000 men, the missing 3,000 officers and 311,000 other ranks. It is somewhat difficult to make a comparison with our own losses, for the telegraphic summary contains no estimate of the percentage of missing deemed to be dead. Mr. Macpherson, in the House of Commons, mentioned that of our total of "missing" (5,353 officers, 182,284 other ranks, the remainders obtained after subtracting the known prisoners of war from the official totals) over 80,000 had been accepted as deaths for official purposes. Confining attention to the item deaths, our losses, all ranks, are 658,704, those of France 1,071,000. An unexpected feature is that we lost more officers than did the French (37,876 against 31,300), although our total casualties are many fewer. We presume the explanation to be a higher ratio of officers to other ranks on the British establishments. It does not seem possible to draw at present any useful conclusions as to the relative losses of the two nations in terms of population. *Prima facie* France has suffered much more than we have (even allowing for our greater losses in maritime war), her absolute losses being greater and sustained by a smaller population. We think this impression is almost certain to be confirmed by subsequent analysis. It must, however, be remembered that the populations of the French dependencies (colonies 44,000,000, Algeria 5,600,000, Morocco 7,000,000, Tunis 1,800,000) have, like our own daughter States, participated in the losses, and we do not know in what proportions. An unofficial report estimates the total casualties of Germany at 6,385,000. The French official report does not account for wounded, which have been estimated by a contemporary to be about 2 millions. The total casualties of the British Empire up to November 10th were 3,049,991. In round numbers, then, we have for the British Empire 3 millions, for France 4 millions, and for Germany 6½ millions. The colonial man power of Germany available for war was small, so that the vast bulk of her losses has fallen upon the 65 million European inhabitants. Had all the French casualties been sustained by the home population, the ratio of losses would be nearly the same in France and Germany—namely, 4 million casualties in a population of 40 millions, and 6½ million casualties in a population of 65 millions. Until, however, we have more details of the German losses, it is impossible to draw conclusions. Even greater reserve is needed in discussing the unofficial estimate of 9,150,000 casualties in Russia. As to the losses of Italy, it was announced on December 31st that on all fronts 460,000 have been killed and 947,000 wounded. Amongst the killed were 16,362 officers. Belgium and Serbia have no doubt suffered heavy losses, but no statistics are available.

THE DEVIL'S MARK AND SUPERNUMERARY BREASTS AND NIPPLES.

OF the numerous medical men who have at one time or another taken an interest in supernumerary mammae and nipples (polythelia) probably few are aware that they were regarded as one of the marks that the devil inflicted on witches when they came under his sway. In a recent article on "The Devil's Mark," Mr. M. A. Murray[1] quotes from "the lawes against witches and conivration," published "by authority" in 1645, the statement that "their said familiar hath some big or little Teat upon their body, wher he sucketh them; and besides their sucking, the Devil leaveth other marks upon their bodies, sometimes like a Blew-spot, or Red-spot, like a flea-biting"; and from Forbes that "on the meaner Proselytes the Devil fixes in some secret part of their bodies a Mark, as his Seal to know his own by; which is like a Flea Bite or blew spot, or sometimes resembles a little Teat, and the part so stamped doth ever after remain insensible, and doth not bleed, though never so much nipped or pricked by thrusting a Pin, Awl, or Bodkin into it." Of these two distinct marks the blew spot is probably either a pigmented mole or possibly a haemangioma, though the absence of bleeding on the somewhat heroic provocation just mentioned is rather against the second suggestion. The little teat was said to secrete milk and to give suck to familiars both human and animal, and to be sometimes cut off by the possessor before examination on suspicion of being a witch. These teats occurred in very various parts of the body, and a number of records are given of what were described as bigges or witch-paps near the anus or pudenda, but explicitly stated not to be piles. These were perhaps not all supernumerary mammae or nipples, as Mr. Murray assumes, for the perineal situation must be unusual. Thus among 105 cases of supernumerary nipples Cameron found that 95 were on the chest, 5 in the axillae, 2 on the back, one on the shoulder, and one on the outside of the thigh. In his treatise on diseases of the breast, published twenty years ago, Marmaduke Sheild gave a full account of polymazia and polythelia, and points out that some writers on teratology hardly appreciate sufficiently that some globose fatty tumours on the posterior parts of the thighs and about the buttocks have pap-like projections, and he shrewdly suspects that some of these may have been described as supernumerary mammae. Some of the witch-paps in the perineal region may have been pedunculated tumours, such as molluscum fibrosum or lipomas, or even warts.

PROFESSOR HARVEY LITTLEJOHN has resigned the office of dean of the Edinburgh medical school, and has been succeeded by Dr. Lorrain Smith, professor of pathology.

[1] *Man*, London, 1918, xviii. 148-152.

MEDICINE IN THE WAR.

A RETROSPECTIVE SKETCH.

BY

MAJOR-GENERAL SIR WILMOT HERRINGHAM, C.B., M.D.

WHEN one looks back upon the nearly five years of war certain recollections stand out, certain experiences of disease and its treatment seem more important than others.

CEREBRO-SPINAL FEVER.

In the first winter, early in January, we saw our first cases of cerebro-spinal fever; few out there had ever seen it in the epidemic form. The British outbreaks had been few and slight, and had occurred at a distance from London. It was a new thing to find strong young men affected, and as we saw more cases the horror of the disease, its unaccountability, our powerlessness to cure it, our inability even to predict its course from day to day, affected us strongly. Sisters were usually changed every fortnight; the disease preyed on their spirits if they nursed it longer.

It was thought that the Canadians brought it with them. Their first troops landed just before Christmas, 1914. But that is doubtful. Cases arose singly from all down the whole of the front. We hardly ever saw two from the same unit, nor could any contact with a previous case be shown. The cases were most distressing to witness. They suffered greatly from pain, were usually unconscious or stupid most of their time, were fed with difficulty, and kept clean with more difficulty still, while herpes and sordes disfigured the skin and the lips. Not much less than half of them died—some quickly, others after a long illness, sometimes with a late onset of vomiting and wasting, which we learned to ascribe to blocking of the canal at the foramen of Magendie and dilatation of the ventricles. In that first winter no serum seemed to have any effect, and not only was treatment powerless but we found ourselves unable to predict even from day to day the course of the disease. A patient would seem to be doing well, and then would relapse and die. Gradually, as Ellis in France and Gordon at home differentiated the strains, serum became more efficacious, but I doubt if under the conditions of active service the mortality ever fell below 35 per cent. The first winter's epidemic was the worst.

A few cases occurred of meningococcal septicaemia, a rapidly fatal disease, marked with an abundant rash, high fever, delirium, and pains in the joints and muscles. There was no meningeal effusion, but in some instances the meningococcus was grown from the fluid in the ventricles.

THE ENTERIC FEVERS.

The next excitement was the occurrence of a few cases of enteric. There were only two field laboratories out by then. Sydney Rowland, one of the greatest losses of the war (he died in 1917 of cerebro-spinal fever), was very active in hunting for carriers. He found many, and among them a man who had been long kept in an army hospital as a carrier, had obtained his discharge, had re-enlisted, and was in active service as a regimental cook at the time. The man was rather proud of himself because he had been the subject of questions in the House of Commons.

It was not until some time in the summer of 1915 that we recognized paratyphoid A readily, but paratyphoid B was known from the first. Paratyphoid A had hardly been seen in England before the war. The rashes are a little different from enteric, and at one time we thought we could distinguish A and B by the rash, but that opinion could not hold water. In 1918 an outbreak of gastro-enteritis was ascribed to *B. paratyphosus* B by the bacteriologists, but as the physicians insisted that the clinical symptoms made that impossible, absorption tests were undertaken, and the bacillus proved to be *B. aertryck*, which had only once before occurred in the United Kingdom, on which occasion also it had been mistaken for *paratyphosus* B at the time.

The small number and comparative mildness of the cases have been a unique feature in this war. There can be little doubt that inoculation is responsible for it. The French had a very large number of cases until they took to a better system of inoculation, but directly they did the numbers dropped. The type of our cases ruled so mild that we were tempted to ask if the character of the disease had changed. But occasional cases of the old type in uninoculated cases—I remember a French interpreter among others—showed that that was not the reason. Occasionally we would see such a case among the inoculated.

The diagnosis of these cases depended at first upon clinical symptoms, the serological test by agglutination, and cultivation. This was satisfactory until in 1916 triple inoculation—T.A.B.—began. Then the agglutination test no longer held good in the simple form. Dreyer's method, using the Oxford standards and relying only on repeated tests, became the standard method; although there have not been wanting critics both of the detail and of the theory itself, it holds the field as yet.

This work is, indeed, bound up with the great subject of immunity, and it must be remembered that what is, perhaps, the greatest pathological school in the country, that of Glasgow, holds that immunity is something which is not only distinct from any qualities, such as agglutination, that we already recognize, but does not even vary very closely with them.

NEPHRITIS.

In the spring of 1915 we began to see an amount of nephritis which, both by its rapid increase and its want of conformity with any conditions, such as weather, likely to account for it, astonished us very much. During 1915 the greatest number of cases actually occurred in July. Later years, however, showed the greatest prevalence in the autumn and winter, the worst being in the very wet weather of the last three months of 1916. These months were marked by an outbreak of suffocative bronchitis which was very fatal. We ascribed it then to influenza, though there was no great epidemic at the time. Pfeiffer's bacillus was, in fact, found in a considerable proportion of these cases. But what we felt sure of was that they led to a great increase of, in fact probably accounted for the great increase of, nephritis at the time. The influenza epidemic of 1918 confirmed this view.

We had strong suspicions, some of us, that the nephritis of France, which was by no means confined to the trenches or even to the front, was of microbic origin. The curves which it showed suggested it, and it seemed largely unaccountable otherwise. It was prevalent in German and Austrian troops and also with the French. But the Belgians had much less of it. The only parallel outbreak known in the history of military medicine was that which took place in the American civil war. The outbreak in our troops was indubitably far more widespread than anything we had ever seen in civil hospitals, but the cases were as certainly milder. Certain symptoms, such as

convulsions, had not the same serious implications that they had at home, and complete recovery took place much more frequently.

In the course of the very careful investigations that were carried on by the Nephritis Committee, Captain Maclean made a contribution to our knowledge of albuminuria in the apparently healthy on a scale (50,000 cases) and with an elaboration never before attempted. And Captain de Wesselow added to our knowledge of dropsy by showing that there was a dropsy of the blood and a dropsy of the tissues which did not necessarily vary together, though they usually did. The observations were novel, and beautifully worked out. The French directed their attention chiefly to the prognosis of the cases. Captain Keith was able to show that a lessened alkalinity of the blood was certainly not the cause of the disease, and in many cases did not occur at all. It seemed both by French and English observations that the prognosis was best tested by experiments on the excretion of certain substances such as diastase or phenolphthalein.

TRENCH FEVER.

Soon after nephritis became prominent, about May and June, 1915, we began also to recognize that curious disease which has now become well known as trench fever. Major Graham was the first to describe its clinical features. McNee, Hunt, Rankin, and Hurst followed. Unlike nephritis, this was really a disease of the trenches, but was also found frequently in the personnel of hospitals receiving cases from the front.

It was early found by McNee that it could be inoculated by means of the blood, but facilities for making experiments with volunteers were not available, and up to 1917 the bacteriologists were unable to detect any organic infecting agent. The American Research Committee joined in a committee set up by the Director General in France in that year, and an elaborate set of observations and experiments on American volunteers were carried out at a special hospital. The joint committee, besides elaborating the clinical features of the disease, were able to report on March 9th, 1918, that the disease was certainly conveyed by lice, and from that time more vigorous measures than before were taken to clean the men from these pests. Good clinical papers by Drummond, Urwick, and Perkins were published in the *Quarterly Journal of Medicine*, and the American experiments were fully described by Strong in his large monograph on the disease.

In its typical form the disease is a recurrent fever with a cycle of about five days, characterized by sudden malaise and headache, an evanescent rash of erythematous spots, an enlarged spleen, and pains whose characteristic site is in the shin bones. But the committee was able to show that the typical chart admitted of many variations, and thus to bring under one head many cases of fever which, though similar in symptoms, varied greatly in the form of their temperature curve. It may be affirmed that the disease is never fatal, but it was shown that it gives rise, chiefly through cardiac irregularity, to a considerable amount of disablement. In some cases also it lasts a very long time and may lead to invaliding.

Meanwhile a similar committee set up in England has been engaged in an important series of experiments, which show that the poison is contained in the faeces of the infected louse and can be conveyed by rubbing them into a scarified area. This committee has examined the effect of heat and various other physical conditions upon the poison and has greatly added to our knowledge. The infecting agent is still undetermined, and no specific treatment of the complaint has yet been discovered, but it is at any rate known that a rather longer confinement to bed lessens the risk of the tachycardia which is the chief sequela.

It was in 1916 also that a curious form of febrile jaundice, due to *Spirochaeta icterohaemorrhagiae*, made its appearance in Flanders. There are several forms of jaundice with fever. That due to enteric was not infrequent, and that due to septic infection was also known. The new form had not previously been observed in Europe, though described by the Japanese. Stokes at the Ypres front and Dawson at the base made careful studies of it. It was hardly ever, if ever, found south of Arras.

POISON GAS.

It was also in the same year that the Germans first used asphyxiating gas, alleging with their usual disregard of truth in excuse for this action that the French had already employed it. The gas first used was chlorine, which was expelled under pressure and drifted across No Man's Land to the French trenches north of the Ypres salient. A day or two later our troops were similarly attacked. Chlorine was eventually replaced by phosgene.

In July, 1917, dichlorethyl sulphide, the so-called mustard gas, was first used in the northern area. And in the same year we began to have cases produced by compounds of chlorarsin, of which that most frequently used was diphenyl chlorarsin.

The action of these gases varied somewhat. Chlorine and phosgene may kill outright; if this does not happen, they cause an oedema of the lungs which, by preventing the oxygenation of the blood, produces a state of anoxaemia, or want of oxygen, under which the circulation fails. The symptoms are greatly aggravated by muscular exertion, which increases the oxygen want of the tissues. Death rarely takes place if the patient survives the third day. But recovery is often prolonged, and certain symptoms, especially sudden attacks of rapid breathing, may persist for a very long time.

Dichlorethyl sulphide vesicates the skin, sometimes very extensively, and produces large areas of erythema, or of brown pigmentation. It causes intense conjunctivitis and oedema of the eyelids, entirely preventing vision for two or three days. It scorches the mucous membrane of the upper air passages, which when severely affected comes away in the form of sloughs, leaving a very septic raw surface, which by inhalation produces septic bronchopneumonia. The latter is the chief cause of death.

Diphenyl chlorarsin was an altogether less dangerous gas. It sometimes produced intense pain at the back of the nose, and sometimes unconsciousness or stupor, but these effects were transient, and it was not believed to have caused any deaths. Some curious nervous symptoms which were observed to occur after it were probably hysterical. Arsenic in quantities that were unmistakably abnormal was recovered from the urine.

The Gas Service rapidly invented a protective cloth helmet, and later a very efficient mask in which the air was respired through a layer of absorbent chemicals. After this was issued casualties arose almost entirely among men who for some reason did not put the mask on sufficiently quickly, or took it off too soon.

We replied effectively with the same weapons, and to good purpose; the German mask was not so good as our own. In the treatment of the chlorine and phosgene cases by far the most important thing was

the supply of oxygen. This was first given by the open method through some sort of funnel. But later Dr. Haldane invented an admirable arrangement by which the oxygen under reduced pressure was led through regulating valves to a mask which fitted the face and could be tied in position. It was most valuable in saving life. Venesection was an additional method of treatment which was of undoubted value for cyanotic cases. Cases which were of an ashen-grey colour were unfit subjects for bleeding, and even under continuous oxygen administration rarely recovered.

The local effects of dichlorethyl sulphide were mitigated by anodyne inhalations of menthol and chloroform, and by gargles, washes, and wet dressings of weak soda solution. Antiseptics were combined with the anodynes in the hope of preventing the septic inflammation of the air passages.

Other Infective Diseases.

Dysentery did not make its appearance in our army till the late summer of 1916. It occurred at the base, whither it was brought by troops from the East, and at about the same time at the front, where there was some evidence that it was partly due to infection in the German trenches. There was a considerable outbreak of it again in the early summer of 1918. The amoebic form was vary rare, but both the Flexner and Shiga forms, and also other kindred infections were common. The type was not on the whole severe. Antidysenteric serum was found of considerable value in treatment. We had no cases of cholera. The ordinary zymotic diseases—scarlet fever, measles, German measles, mumps, and diphtheria — all occurred as epidemics at different times.

Troops from the East brought malaria with them, and some battalions were badly infected. But regular quinine treatment combined with rest restored them, and they were able to take their place in the line. The quinine was given by the mouth, according to the method recommended by Ross.

Wounds of the Chest.

Of the greatest interest to all physicians were the wounds of the chest. Such cases are extremely rare in civil practice, and probably not one in five hundred of all the medical officers had ever seen such a case. At first the treatment was wholly expectant. Then we began to aspirate the blood after perhaps a fortnight. In 1916 Major Armstrong reported in favour of aspiration as early as the second or third day. Where feasible this was combined with oxygen replacement. At the end of that year French surgeons, especially Duval, urged a much more daring surgical treatment, and Gray, Gask, and Lockwood led the way in our armies. The first great improvement was the radical cleaning of all sucking or leaking wounds where there was obvious connexion with the open air, and removal of splintered rib, along with thorough evacuation of the contents of the pleura and closure in layers of the thoracic wound. No doubt some of the cases became septic and had to be drained, but many did not, and the gain to the patient was very great, for these cases had been very fatal. The second was the removal of large foreign bodies where accessible. It was proved that the lung could be handled with much less risk than had been suspected, and if the new operation was a little overdriven at first this tendency was soon corrected by experience, and a really great advance in surgery attained.

The medical problems were no less interesting. We found that in such cases the wounded side collapses and the diaphragm rises. The effused blood sometimes deposits all its fibrin and remains a defibrinated liquid, though at others clots of the usual kind are found. Aspiration was not followed, as we at first expected, by fresh haemorrhage, and could consequently be practised early. Apart from a severe laceration of the lung, the chief danger lay in septic infection of the haemothorax, and we became skilful in detecting the earliest signs of this condition, which needed prompt surgical interference. Unlooked-for conditions arose on the opposite or unwounded side. Septic bronchopneumonia from inhalation was not so common as we expected, but hypostatic congestion was not infrequent, and more frequent still was the massive collapse, to which, as a sequel of operations on the abdomen, Pasteur had drawn attention before the war. Bradford and Elliott made important observations upon this and other conditions occurring in the wounded chest.

Gordon Holmes was able to draw up a fine contribution to the physiology and pathology of the cerebellum from his experience of gunshot wounds of the head, and Bradford and Bashford worked out the pathology of a form of epidemic neuritis and poliomyelitis that occurred in the army.

Convalescent Camps.

In the later years of the war men were drafted from hospitals, as soon as they were well enough, into large convalescent camps, which were for the most part admirably managed. Outdoor games and indoor recreation of all sorts were provided. The aim was to give the men a cheerful and enjoyable time, while strengthening their bodies by regular and at the same time interesting exercise. The old form of physical training was largely replaced by games and by such occupations as gardening or farm work. One convalescent camp had fifty acres of land under cultivation.

Mobile Laboratories.

A novel feature of this campaign was the importation of bacteriologists and their laboratories into the front area. Their effect upon the medical work was not easy to express. Not only were they constantly employed to help in the diagnosis of fevers and infections, or in prevention of disease, as by the hunt for carriers of enteric, dysentery, and cerebro-spinal organisms; but they were constant centres of new thought and new effort. Their work was not to be measured by their publications, for they were continually engaged in helping and often stimulating the medical officers who were making fresh observations. Trench fever (McNee), cerebro-spinal fever (Ellis), spirochaetosis (Stokes) were, however, greatly elucidated in these mobile laboratories of the front area, and at the base Dreyer and, later, Perry perfected the diagnosis of enteric, Wright made observations on the resistance of the wound to infections, Martin worked at the problem of dysentery, and many other pathologists made valuable contributions to medical knowledge.

To this we must add also the constant help afforded by the Medical Research Committee at home—not only by the provision of special workers and special apparatus when needed, but also by the constant supply of all scientific publications produced by physiologists, chemists, and pathologists at home, and by their continual help through Colonel T. R. Elliott in the improvement of note-taking and records of all kinds. The field card at present in use, which was due to him and to them, is alone an immense stimulus to the medical officers and a great gain to medical science.

PREVENTIVE MEDICINE AND SANITATION.

It is difficult to do justice to the sanitary side, for their work lay outside the view of clinical men. But we could all recognize their unceasing efforts to prevent infection from excreta, to purify water, and to deliver the army from the pest of vermin. How difficult the last is no one can know who has not seen an army in the field. The dietary of the army was in the charge of this department, which was able to save great sums of money to the country by reducing the really excessive ration at first issued.

We have passed through a time which, thank God, we shall never see again, under a strain which perhaps we did not really appreciate till it was relaxed. Looking back upon it all, we can say, first, that without any doubt whatever the medical work of the army was extraordinarily well done; second, that those at any rate who were connected with hospitals learned more than they ever learned before; and, lastly, that perhaps the greatest lesson of all was that over this wide area and throughout this immense body of men there was a unity of effort and a fellowship of spirit such as we had never before imagined could exist.

CASUALTIES IN THE MEDICAL SERVICES.

ROYAL NAVY.

Died on Service.

SURGEON LIEUTENANT M. MEEHAN, R.N.

Surgeon Lieutenant Michael Meehan, R.N., died at the Italian Military Hospital at Venice, of pneumonia, on December 13th. He was the son of the late Mr. John Meehan of Kildysart, co. Clare, and was educated in the school of the Royal College of Surgeons, Ireland, in Dublin, taking the diplomas of L.R.C.P. and S.I. in 1912. He entered the navy as surgeon on April 11th, 1913, and at the time of his fatal illness was serving in H.M.S. *Earl of Peterborough*.

ARMY.

Died on Service.

MAJOR A. U. PARKHURST, S.A.M.C.

Major Arthur Usk Parkhurst, South African Medical Corps, died of pneumonia at Durban, Natal, on November 27th, aged 48. He was the fourth son of the late Captain Horatio John Parkhurst of Pontymoel, Monmouthshire, and was educated at Cardiff and St. Mary's Hospital, Paddington. He took the diploma of L.S.A. in 1901, and served as civil surgeon in the Boer war from the date of his qualification to the end of the war. After practising in Cape Colony and the Orange Free State, he settled at Estcourt, Natal. During the present war he went through the campaigns in German South-West Africa (where he lost an eye) and German East Africa. He was in command of No. 3 General Hospital, South Africa, for a time, and subsequently of a native hospital of 2,000 beds at Durban.

CAPTAIN J. V. DUFFY, R.A.M.C.

Captain Joseph Vincent Duffy, R.A.M.C., was reported as having died of influenza while on service at Dar-es-Salaam, East Africa, in the casualty list published on December 23rd, 1918. He was educated at Glasgow, and took the Scottish triple qualification in 1914, after which he was assistant to Dr. A. M. Walker of Hebburn-on-Tyne, till he took a temporary commission in the R.A.M.C. on August 12th, 1915, and was promoted to captain after a year's service. He had served in Egypt and with the 29th Division at Suvla Bay, and proceeded to France with the Division, being present at the first battle of the Somme. He served later in India and East Africa.

CAPTAIN H. R. LAWRENCE, M.C., S.A.M.C.

Captain Henry Ruthven Lawrence, M.C., South African Medical Corps, died of pneumonia in France on December 14th, 1918, aged 34. He was the only son of the late Dr. T. G. Lawrence, of George, South Africa, and was educated at Edinburgh, where he graduated M.B. and Ch.B. in 1908, and M.D. in 1910, also taking the diploma of F.R.C.S.Ed. in 1912, and studying at Dublin and Freiburg. He was in practice at Newlands, Cape Province, South Africa, and surgeon to the Victoria Cottage Hospital at Wynburg when the war began, and he at once joined the South African Forces. He served in the campaign in German South-West Africa, and afterwards in France.

Repatriated.

Captain M. Donaldson, R.A.M.C. (temporary).
Captain E. H. Jones, R.A.M.C. (temporary).
Captain H. R. Jones, R.A.M.C. (temporary).
Captain H. A. Sandiford, R.A.M.C.(T.F.).
Lieutenant A. M. Clare, R.A.M.C. (temporary).
Lieutenant J. A. Loughbridge, R.A.M.C. (temporary).

Ireland.

THE FIRST MEMBER FOR QUEEN'S UNIVERSITY, BELFAST.

SIR WILLIAM WHITLA was elected to represent Queen's University, Belfast, in Parliament, by a majority of 1,369 on a total poll of 1,605. Sir William Whitla consented to stand in response to an invitation from a large body of graduates of all the faculties. In an address issued on December 4th he expressed his opinion that it would be the first duty of every man elected to the new Parliament to support unwaveringly the Coalition in their demands for the restitution of the devastated lands of our Allies, for indemnities for passenger ships sunk, and for all life and property sacrificed in air raids on undefended cities. He added, however, that he did not conceive it to be the duty of a university representative to consider himself a mere party politician. At the same time he expressed his conviction that the happiness and prosperity of Ireland could only be maintained as long as she remained an integral part of the empire. He added that one of the determining factors which had induced him to enter parliamentary life was the totally inadequate representation of the medical profession at Westminster. The establishment of a Ministry of Health with advisory boards, the housing of artisans, hospital reforms of a sweeping kind, and every bill devised to improve the physical condition of the people, would have his support. He dwelt on the vital importance of Government aid for original research in every department of medicine, and said that scientific research and the teaching of science must be fostered by large and judicious Government grants to the laboratories in the different universities. Finally he expressed himself in favour of local option.

After the declaration of the poll the new member paid a tribute to the good humour of his opponent and spoke in warm terms of the great services to the university of the Vice-Chancellor, Dr. Hamilton, who had courageously maintained in the face of almost universal disapproval the strong claims of Belfast to a university of her own. Sir William Whitla looked back, he said, with real pride to the fact that he had fought by the Vice-Chancellor's side for this cause, and he shared his satisfaction in seeing the university firmly established, highly successful, and sending a representative to Westminster to watch over her interests along with Ulster and the rest of Ireland. He then referred to the hard task of Mr. Finnegan, the secretary, in building up the new parliamentary register, having to trace old graduates who, after service all over the empire, had returned to spend the remainder of their lives in the home islands. The Vice-Chancellor, in the course of a speech bringing the proceedings to an end, said that Sir William Whitla had been appointed to the Chair of Materia Medica and Therapeutics shortly after his own appointment to be head of the old Queen's College. Sir William Whitla had been elected their representative at a psychological moment of extreme importance; it was an age of reconstruction, and among the matters which at a very early date would call for the attention of Parliament was the reconstruction of the educational system, from primary education up to the university; and another was the great question of the health of the people.

In connexion with Sir William Whitla's reference to the difficulty of completing the register, we may take the opportunity of pointing out that there are still several

hundreds of medical graduates of the old Queen's University and Royal University who have not registered as graduates of the new Queen's University, Belfast, and are not known to have selected the National University, Dublin. The privilege was open to them before this election and remains still open. The total number of persons on the register was 2,039, and of those 1,605 voted—about 79 per cent. The proportion would, we understand, have been higher but that a certain number of votes from the army and navy arrived too late to be counted, owing to a breakdown in the Holyhead mail.

POOR LAW MEDICAL OFFICERS' SALARIES.

The Local Government Board has addressed a letter to the Omagh Board of Guardians with regard to the salaries paid to its medical officers. It points out that the cessation of hostilities has altered the outlook, and should enable the local bodies to take a more confident view of their financial resources, and to deal with matters such as this in a liberal and generous spirit. The Board adds that there has been no change in its views, and seriously urges the guardians to arrange terms with their medical officers. The Strabane (co. Tyrone) Board of Guardians has made a scale of salaries for its medical officers, with an initial salary of £180 and triennial increments of £10 until a maximum of £250 is reached. This is the best scale that has been made in any union in Ulster, and is almost entirely due to the efforts of Dr. William Lyle, Newtownstewart. The Urlingford (co. Kilkenny) Board of Guardians has granted a similar scale to its medical officers with retrospective application.

Scotland.

HOUSING IN GLASGOW.

THE Glasgow Corporation has in hand a very large scheme of housing, and it has been decided to give immediate effect to the first part, which will provide 7,000 dwellings in various parts of the city. It is the intention to erect cottages—each dwelling being furnished with bath and scullery, and a garden plot in some districts; but in others there will be a combination of cottages and three-story tenements. In the scheme for the first district to be taken in hand the buildings will be constructed of stone, brick, and concrete blocks and concrete slabs. The intention is that the rents shall correspond with pre-war costs. The expenditure will be made as to 75 per cent. from a Government grant; the provision of the remaining 25 per cent. will involve a rate in Glasgow of 2d. in the £. The complete scheme is to provide 47,000 houses at the rate of 5,000 per annum. The scheme has only been undertaken after a thorough examination of each district, its existing house accommodation, and the social complexion of the community. Some time ago, when the central area was comparatively purified, the fatal mistake was made of erecting dwellings out of proportion to the economic resources of the people; on this occasion special attention is being given to this point. The new scheme does not touch the slum areas, which can only be purified at great cost, amounting in the case of Glasgow to a rate of 2s. 3d. in the £. It is understood, however, that the Local Government Board in Scotland is framing a scheme involving Government grants on a large scale.

England and Wales.

THE AIR RAIDS ON LONDON.

THE full official report of the London Fire Brigade upon the twenty-five air attacks on the metropolis between May, 1915, and May, 1918, is now available, and although it contains little that was not common knowledge, the particularity with which the events are set forth makes it an important historical document.

Damage to Hospitals.

One curious feature of the raids was the frequency with which hospitals were damaged, and the relative smallness of the resulting casualties. At least seventeen hospitals, not to speak of several nursing homes, suffered either by the explosion of a bomb in the neighbourhood, or by being struck with an anti-aircraft shell, yet it is not clear from the report that a single person within the buildings was killed. St. Bartholomew's Hospital was twice damaged: in the Zeppelin raid of September 8th, 1915, 1,200 squares of glass were smashed and the roof broken, and in the first big daylight raid on June 14th, 1917, the nurses' quarters were struck. The Royal General Dispensary in Bartholomew Close was also damaged on both occasions. Another institution to have the double measure of affliction was the Bethlem Royal Hospital for the Insane; a projectile fell on the lawn on September 29th, 1917, and caused considerable havoc, and on December 18th a dormitory building of four floors suffered by an explosive bomb. The British Red Cross Society was also twice hit, once at its premises at Burlington House, and again at a covered court on Dulwich Common, when two persons were killed. One of the earliest raids—the third—injured the façade and smashed the windows of the National Hospital for the Paralysed and Epileptic, of the Queen Alexandra Hospital for Children, and of the Examination Hall of the Royal Colleges. Guy's Hospital Medical School suffered in the daylight raid of July 7th, 1917, and during the series of moonlight raids at the end of September of that year one floor of the South-Eastern Fever Hospital at New Cross was damaged by fire; an unexploded bomb dropped on a heap of coke in St. Pancras Infirmary, and anti-aircraft shells accounted for slight damage to the Poplar General Hospital, the Royal Hospital for Incurables at Putney, a private hospital in Park Lane, and four military hospitals as far apart as Shooter's Hill and Hampstead, with, apparently, injury to only one person within the buildings. On September 4th of that year a bomb exploded in the roadway between Charing Cross Hospital and the offices of the British Medical Association. The front of the hospital was badly scarred, and the front of the Medical School partially wrecked, but the damage to 429, Strand, according to the report, was limited to window breakage. This bomb killed three persons and seriously injured ten others. Two years previously, a quarter of a mile away, a single bomb from a Zeppelin had killed seventeen people outside the Lyceum Theatre; but the greatest destruction of life by a single hit took place on January 28th, 1918, at the printing works of Messrs. Odhams, in Long Acre, where the BRITISH MEDICAL JOURNAL was machined. Thirty-one persons were killed and ninety-five taken to hospital; the place was used as an air-raid refuge, which accounted for the high casualty list. The material damage was very extensive also, and included the destruction of many tons of paper which had been accumulated for the JOURNAL. The Harley Street neighbourhood seems to have enjoyed a measure of immunity, but almost the last bomb to fall on London, on Whit Sunday, fell in Park Crescent, Portland Place, and smashed the windows of many houses in the vicinity.

Ambulance Work during Air Raids.

The removal of cases of injury and shock during a bombardment from the air required a large and rapidly mobile service, far beyond anything necessary for dealing with ordinary street accidents. The existing London County Council ambulances were altogether inadequate for such an emergency, and therefore various ambulance bodies were approached by the municipal service and asked to co-operate. The military authorities placed their hospital vans at the disposal of the county, and certain voluntary organizations which have made it their business to meet trains bringing wounded from the front and to perform other public services offered their ambulances also; these bodies included the London Ambulance Column, the London Volunteer Rifles, the National Motor Volunteers, and Voluntary Aid Detachments. Cars were also sent from the Crystal Palace and Greenwich by the Royal Naval Division, and certain other Red Cross and private ambulances were provided. The result has been that on the occasion of a raid from 70 to 100 motor ambulances, as well as a large number of motor cars for sitting cases, have been distributed among the seven Council ambulance stations in the county. Each of these vehicles was usually provided only with a driver, but through the assistance of the British Red Cross Society and the Order of St. John the services of skilled first-aid attendants were secured. All these attendants were continually instructed and rehearsed in a uniform method of dealing with air-raid casualties, and were never allowed to lose touch with the system,

however seldom their services might actually be utilized. In addition to these resources, the Commissioner of Police placed at the call of the London service a number of ambulances which were stationed in Essex, just across the metropolitan border. On the first warning of a raid by direct cable from Scotland Yard, all the ambulances proceeded to their nearest stations, where they were numbered according to the order of arrival. All the stations were connected by direct telephone with the central office of the ambulance service at the Fire Brigade Head Quarters in Southwark Bridge Road. Here the officer in charge controlled operations by means of a wall map of London, with variously coloured and numbered pins to represent the ambulances attached to each station. When an intimation was given through any telephone—the one word "ambulance" sufficing to connect to head quarters—that bombs had been dropped and that there were casualties, a telephone message was sent to the ambulance station nearest the locality concerned, and one, two, or more ambulances were dispatched. These ambulances, after taking the cases to the hospital, went back to their stations, and their return was telephoned to head quarters. By moving the pins in accordance with the telephonic communications, complete track was kept of each ambulance. Occasionally it was necessary to send out the whole of the ambulances from one station, whereupon ambulances from more distant stations were brought up so as to reinforce the service at the critical point. The idea was to secure a concentration of ambulances in the areas attacked without denuding any area. On the occasion of one Zeppelin visit, in the absence of information as to the course of the enemy, ambulances after the first bombs had dropped were posted according to the direction of the wind, a piece of strategy justified by the event when bombs immediately fell along that route. The absence of any hitch in the arrangements from first to last was due not only to the completeness of the organization, but also to the coolness of the attendants and telephone operators. In the last air raid, on Whit Sunday, the cases taken to hospital by the ambulances numbered 78; this was largely exceeded during the raid on January 28th, when there were disasters at two air-raid shelters. The officer in charge of the ambulance service of the London County Council is a medical man of large organizing experience.

Correspondence.

RISKS AND REWARDS.

SIR,—With the existence of conditions which presuppose the not far-distant conclusion of a victorious peace, it is not unreasonable to imagine that many honours will be conferred, and that amongst the recipients at least some members of our profession will find a place. If, however, such honours are to carry with them the respect of the profession it is essential that those who advise His Majesty in such matters should have a clearer sense of proportion.

The risk and sacrifice and the valour shown should be the gauge of the reward. Some of those who have worked at home in their own neighbourhoods have gained greatly by their stability in practice, have gained by the absence of their competitors, and in certain cases they have considerably added to their incomes by their receipts for the war work they have done. It will be a lasting scandal if such are decorated whilst those who have gone—especially if they have gone voluntarily prior to the advent of compulsory service—are left unnoticed and allowed to come back maimed or damaged in health and pocket, without due recognition of their sacrifices.

Another point that has attracted attention is the small amount of recognition of service accorded to R.A.M.C. officers other than those on the Regular list. Attention was drawn to this in Parliament, on February 25th, by Mr. Roch, who stated that whilst one of every two of the regular medical officers had been decorated, only one in fifty of the 14,000 civilian doctors had been so honoured.

Mr. Macpherson's reply was to the effect that it was natural that more decorations had been given to officers R.A.M.C. than to civilian doctors, because the first went out at the very beginning of the war and were established servants at the time. But he also said that most (*sic*) of the civilian doctors were kept at home doing part time work—carrying on their own practice and also doing civil work in hospitals—so that they had not the same opportunity for decoration given to the R.A.M.C., who were established officers, and had been bearing the brunt of work at the front and in the trenches (*sic*) (BRITISH MEDICAL JOURNAL, March 16th, 1918, p. 324). Let us re-examine this statement in the light of the proportion of decorations to killed amongst regular and auxiliary officers R.A.M.C.

In your valuable JOURNAL (January 15th, 1916, pp. 93–94; January 27th, 1917, pp. 124–126; February 9th, 1918, pp. 178–180) lists of killed and died of wounds for the years 1915, 1916, and 1917 are to be found. From these it is easy to correct Mr. Macpherson's amazing statement. The number of killed and died of wounds and the number of decorations awarded amongst regulars and auxiliary officers respectively can be stated in clear and precise terms. Such a statement completely refutes Mr. Macpherson's second reason—that most of the "civilian" (that is, non-regular) doctors were doing work at home.

In these three years auxiliary R.A.M.C. officers earned 7 V.C.'s and 803 M.C.'s (see table below). V.C.'s and M.C.'s are not earned doing work at home.

In 1915:
- 2.75 rewards for valour were conferred on regular R.A.M.C. officers for each officer killed.
- 0.74 rewards for valour were conferred on auxiliary R.A.M.C. officers for each officer killed.
- 3.37 D.S.O.'s were conferred on regular R.A.M.C. officers for each officer killed.
- 0.15 D.S.O.'s were conferred on auxiliary R.A.M.C. officers for each officer killed.
- 4.87 other orders (from G.C.B. down) were conferred on regular R.A.M.C. officers for each officer killed.
- 0.18 other orders were conferred on auxiliary R.A.M.C. officers for each officer killed.

In 1916:
- 4.00 rewards for valour were conferred on regular R.A.M.C. officers for each officer killed.
- 1.80 rewards for valour were conferred on auxiliary R.A.M.C. officers for each officer killed.
- 5.77 D.S.O.'s were conferred on regular R.A.M.C. officers for each officer killed.
- 0.23 D.S.O.'s were conferred on auxiliary R.A.M.C. officers for each officer killed.
- 8.33 other orders were conferred on regular R.A.M.C. officers for each officer killed.
- 0.40 other orders were conferred on auxiliary R.A.M.C. officers for each officer killed.

Year.	Killed and Died of Wounds.			Rewards for Valour.				Orders.				Percentages to Killed and Died of Wounds.							
				V.C.		M.C. and Bar.		D.S O. and Bar.		G.C.B , K.C.B., C.B., K.C.M.G., C.M.G., and others.		Rewards for Valour.				Orders.			
												V.C.		M.C. and Bar.		D.S.O. and Bar.		G.C.B., K.C.B., C.B., K.C.M.G., C.M.G., and others.	
	Total.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.	Reg.	Aux.
1915*	62	8	54	0	2	22	38	27	8	39	10	0	3.7	275	74	337	15	487	18
1916†	161	9	152	0	3	36	272	52	35	75	62	0	2	400	180	577	23	833	40
1917‡	193	21	172	0	2	17	493	107	70	112	81	0	1.1	80	287	509	41	533	41

* BRITISH MEDICAL JOURNAL, January 15th, 1916, pp. 93 and 94. † Ibid., January 27th, 1917, pp. 124–126.
‡ Ibid., February 9th, 1918, pp. 178–180.

NOTE.—In 1914 Captain Ranken, R.A.M.C., was awarded a V.C., and in 1915 Captain Sinton, I.M.S., was awarded a V.C.

In 1917:

0.80 rewards for valour were conferred on regular R.A.M.C. officers for each officer killed.
2.87 rewards for valour were conferred on auxiliary R.A.M.C. officers for each officer killed.
5.09 D.S.O.'s were conferred on regular R.A.M.C. officers for each officer killed.
0.41 D.S.O.'s were conferred on auxiliary R.A.M.C. officers for each officer killed.
5.33 other orders were conferred on regular R.A.M.C. officers for each officer killed.
0.41 other orders were conferred on auxiliary R.A.M.C. officers for each officer killed.

Yet all this large proportion of decorated regular R.A.M.C. officers were only carrying out the duties for which the country had paid and fitted them throughout their professional careers, and were making no sacrifices other than those their chosen career entailed, whereas the auxiliary officers were risking everything—their positions in the world, as well as their lives—in a service whose advantages and enjoyments had never previously been reaped by them; they had no promotions to look forward to, and no pensions to comfort their old age if health broke down. The disparity of recognition is startling.—I am, etc.,

Dec. 26th, 1918. FAIRPLAY.

THE PREVENTION OF VENEREAL DISEASE.

SIR,—Many of your readers have no doubt seen the letter on this subject which appeared in the *Times* on December 28th, and the reply published on December 31st, but in view of the early demobilization of the army, the matter is of such paramount importance that I wish to put forward some reasons why the measures advocated by the gentlemen who signed the first letter are not only unlikely to be crowned with success, but may even lead to a worse condition of things.

What that letter practically advises is that any person (presumably of either sex) should be able to obtain from a chemist materials for chemical "prophylaxis" to be used before running the risk of infection. Now, in the first place, can any one guarantee that such "prophylactic" measures are infallible? I know they are not; within the last year I have had personal experience of 5 cases—3 of syphilis and 2 of gonorrhoea—all among the educated officer class, and every one of those victims assured me that he had carefully used the latest chemical "prophylactic" materials obtainable. This is to my mind sufficient to prove that a general use of such methods would induce a feeling of security from infection among those employing them which is false and not justified by results.

What, then, is likely to be the outcome? Let us suppose an experiment with three groups of, say, 1,000 men each. The first group shall be men sober, cold blooded, well instructed in the technique, skilful with their fingers, and therefore capable of using the materials supplied rightly and intelligently and with the meticulous care necessary in a laboratory experiment; allow them to use this chemical "outfit" under the best possible circumstances of housing and environment. The second group shall use the same measures under what I will describe as "ordinary working conditions"—that is, when excited, perhaps drunk, clumsy-fingered, untrained and unskilled in technique, and therefore incapable of employing the method to the best advantage: let them also attempt it in localities ranging from behind a hedge to a West End flat. The third group shall be absolutely unprotected in any way whatever. Then if all three groups were exposed to exactly the same chance of infection at the same time, it stands to reason that the first group will show very few cases of disease, the second group a great many more, and the third, quite unprotected, group the most.

I am fully convinced that the dread of the effects of gonorrhoea and syphilis is a most potent factor in keeping young persons of both sexes straight. If the fear of the risk of infection be removed and a feeling of security induced by a course of instruction in the use of prophylactic outfits, then there will be a large increase in the number of those who will incur the risk of disease. I am confirmed in this opinion from what I have heard from commanding officers at dépôts where I have given lectures to several successive units as they pass through to complete their training. They have told me that the result of a lecture in which I have very graphically informed the soldiers of the results of untreated syphilis and gonorrhoea has been that the number of cases reported during the remainder of the stay of that unit decreased from 80 to 50 per cent. It has been urged against this line of argument that medical students, who might fairly be considered to be acquainted with the ordinary dangers of venereal disease, are not the most continent of mankind. This may be so, but the medical student who falls a victim is, in nine cases out of ten, only just free from university or school discipline, and in his first two or three years at a medical school studies only science, anatomy, and physiology; to him, prior to his clinical work, venereal disease is only a name.

I am so convinced of the deterrent effect of dread of infection on young men because I have for the last forty years and more been intimately mixing with them as a competitor, equal, and friend in various forms of athletic competition and have served on committees for the government and furtherance of sports of all kinds. Hundreds of young men have spoken to me on this subject as they might to one of themselves. I know that a very large number of them have refrained from running the risk of infection owing to the medical information I have imparted to them as to the effects of these diseases.

If organized instruction in prophylaxis before exposure is to establish a sense of security among the young, it is pretty certain that a very much larger number will go astray. Among this large number will be a certain small proportion belonging to the first group mentioned; the much greater proportion will be in the second group; the result will be that through trusting to their chemical safeguards a certain number—probably fairly large—will become infected. Should the number of those who yield to temptation be very materially increased over the number of those who now do so under present conditions, it appears extremely probable that the number of cases of venereal disease in the community will be actually increased instead of diminished. For this reason I am of opinion that the universal recommendation and issue of prophylactic outfits to the general public may do more harm than good.

I am ready to grant that in the case of men under discipline, as in the ship or regiment, these "sanitary measures" might prove fairly efficacious if great care is taken that the men are very efficiently instructed, but the navy and the army now are melting into the civil community, and I cannot myself see any reputable physician standing up in a large meeting of civilians of either sex and instructing them in these measures, as might be done by a medical officer of a battleship or a battalion. If it is right that men be instructed in prophylactic measures, then women must also be instructed. It is useless to recommend precautions for one sex only. At what age, when, where and how, instruction is to be imparted to the female sex, I frankly decline to discuss.

The policy of the National Council which is now being carried out in close co operation with the President of the Local Government Board is to educate, educate, educate. Let as many men and women as can be approached be fully instructed in the nature of and the mischief caused by venereal disease and the necessity for the earliest possible treatment if infected, and also for what is known as early preventive treatment as soon as possible after the risk of infection has been incurred. It is evident that "early preventive treatment," carried out under skilled supervision, is much more likely to be effectual than "pre-risk-of-infection prophylaxis" undertaken for himself by an excited or half-drunken man. Therefore, this policy seems to me more likely to meet with success than the alternative.

Arrangements are now in hand, and I hope will soon be perfected, by which the special clinics may be extended to every part of the country to cope with the problem of venereal disease on demobilization. By these it should be possible to secure the continuous treatment which is necessary for cure and also the early preventive treatment which may avoid the development of the disease.—I am, etc.,

London, W., Jan. 1st. E. B. TURNER.

REPRESENTATION.

SIR,—Your article on representation in the JOURNAL of December 21st, 1918, was very interesting, and especially that part of it in which it is confessed that only about 50 per cent. of the medical practitioners belong to the premier voluntary medical organization. There must be something wrong when such a state of affairs exists. The officials and the members of committees—in other words, the section that now and for some years has run the British Medical Association and shaped its policy—will throw the blame on the supposed indifference of the profession. The true explanation, that it may be the policy and methods pursued that are at fault, does not seem to occur to them. The British Medical Association, having regard to prospective medico-sociological legislation, ought, as the voluntary organization of an exploited profession, to be the finest, the strongest, and the best equipped association in the kingdom. Its attitude over the Insurance Act was wrong and its policy over the proposed Ministry of Health Bill was and is not good. The political rights of men serving overseas were not respected. And it is to be presumed that the Association approves of the emasculated Health Bill now before the public. The Association has done little, with the rise in prices, to agitate for and secure more adequate remuneration for the profession, civilian or military. Compare its record in this direction with that of any organization of the workers. Some of its representatives sit on Government Committees, and when the reports are not published are content to utter only a feeble, if any, protest.

This is not the way to secure the respect and confidence of all sections of the profession, and I suggest the following standards:

1. That all officials of the British Medical Association should pledge themselves not to accept any "honour" or any permanent official post.
2. That all members of the British Medical Association committees should pledge themselves in the same way, and especially that those on the parliamentary or politico-medical committees should give a pledge not to be themselves candidates for Parliament.
3. That the policy of the Association should be independent, should not be subservient to Government departments, and should be truly representative of all sections of the profession.

The objection, hitherto upheld, to the "uninstructed vote" is an example of how things ought not to be done. To talk of an uninstructed vote in connexion with the general electorate may be allowable, but as regards the votes of an intellectual profession it savours of insult.

Surely we can now in the new year begin with a clean slate. There is a spirit abroad that all is not well in the Association. Not only must the policy of the Association be clear, unequivocal, individually disinterested, and impartial, but it must be recognized as such. Let all those whose policy—say, from the time of the Insurance Act downwards—has brought the Association to its present position of half strength and diminishing confidence explain the position frankly to their constituents, and ask to be replaced by others in whom more confidence may be shown. A united professional front is worth many individual sacrifices, and while grateful to each individual for invaluable services rendered, and regretting their departure from the work of the Association, the younger generation of the medical profession are realizing that such things must be, and that a break with the policy of the past must be made sometime, somewhere, and soon.

My last letter, some time ago on the subject of the policy of the Association regarding the Ministry of Health Bill, nearly provoked disciplinary measures, and as I am still in khaki I beg to be allowed to rest till demobilization under the *nom de plume* of

December 21st, 1918. HAMILCAR.

THE HARDSHIPS OF THE BUSY PRACTITIONER.

SIR,—I have recently received the circular concerning the distribution of the new Exchequer Insurance Grants (SUPPLEMENT, December 14th, 1918, p. 91), and I have not yet ceased to wonder what the man did who pays income tax on £1,001 a year to be left out in the cold, when the man who pays on £999 is a participator in the grants. No thinking man will deny that the practitioner with less than £500 a year must have been badly hit owing to increased cost of living and greater working expense during war time, especially if he had many dependants, and nobody grudges him a little extra. We of the larger practices have, in common with our less busy brethren, stood as a guarantee of the good faith of our patients' claims on the Government during war time, and up to the present we have had certificates to sign by the hundred. The principal of these are: army and navy pay slips, discharged soldiers' and sailors' life certificates, mothers' pensions for loss of son, and widow's for loss of husband; certificates as to the number of children, as to inability to earn full or partial livelihood, and many others.

We have had a general increase of sickness owing to the large proportion of women on our panels, and no matter how overworked we were, we felt in duty bound to attend the children of these, well knowing that there were too few doctors in this populous district to do the work; in fact, to put it briefly, the big practice man, if he is not altogether a physical wreck from overwork, has led a dog's life for the past three years, and that not from his own choice, but from a patriotic feeling that if he was not serving his country in the field, he was doing his best at home; he did so, too, without any appreciable increase in his own income; in fact, in many cases like my own the income of 1918 would not quite reach the level of the income of 1914.

We had to contend with an increase in cost of living and in working expenses, a big increase in the income tax, and a drop in our notification fees from 2s. 6d. to 1s. (I think the only instance during the war of a reduction of fees to any particular class—one might call it a war bonus reversed).

We have not sought any reward for our extra work. I think most of us would prefer that we had worked hard for our country without wanting a reward. But the manner of the distribution has made some of us wonder if perhaps, after all, it might not have been better to keep our health and strength and be the man with an income of £999 a year.—I am, etc.,

G. C. JOHNSTON ACRES, M.R.C.S., L.R.C.P.

Clapham Junction, S.W., Dec. 26th, 1918.

MEDICAL RESETTLEMENT.

SIR,—Medical officers will be pleased to read in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of December 28th, 1918, that a letter expressing the opinion that doctors returning from military service should be given preferential treatment in the large amount of medical work of a military or national character that will be available throughout the country, has been sent to the War Office, Ministry of Pensions, the Ministry of National Service, and the Local Government Board.

May I suggest that invalided and discharged medical officers, who are unable to do or to continue general practice owing to their various disabilities, should be given the option of receiving appointments which have arisen during this war?

The advantage thereby gained would be twofold—namely, the more able-bodied medical officer can return to his civil practice, and the disabled, as far as practicable, could still be of service from a medical point of view in a less strenuous way.

I should like to know what is to be done in the way of procuring for the disabled medical officer some suitable work.—I am, etc.,

N. H. LINZEE,

Hampton Wick, Dec. 29th, 1918. Late Captain R.A.M.C.(S.R.).

MEDICAL DEMOBILIZATION.

SIR,—Dr. F. C. Eve, in his letter, criticizes the proposal of the Government to call up medical students as soon as qualified, on the ground that the hospitals will be crippled on account of lack of house-physicians and house-surgeons. There are a large number of young doctors, both in the army and navy, who on account of the war have not held such appointments, since they considered the requirements of the services to be more important than those of the civilian hospitals, however advantageous it might have been to them to have availed themselves of the experience that such appointments afford. These officers on demobilization will be anxious to hold these resident appointments.

Many of them, on account of the nature of the duties on which they have been employed, have seen little of medicine or surgery during the last four years.

Surely these officers should have a prior claim for resident hospital appointments to men who, although they have been doing most excellent work, have had, it must be remembered, far better opportunities, in many cases, of gaining professional experience.—I am, etc.,

W. HERBERT BUTCHER,
Temp. Surgeon Lieutenant R.N.

Shrewsbury, Dec. 29th, 1918.

PUBLIC MEDICAL APPOINTMENTS AND SALARIES.

SIR,—The circular letter sent by the British Medical Association to the clerks of town councils and other bodies, advocating an advance in salaries of about one-third above what they were before the war, appears to indicate an appreciation on the part of the Association of the unsatisfactory conditions attaching to public medical appointments in the matter of payments. The communication will, or will not, be considered by some committee of the local body concerned, and the misfortune is that there is neither any means of ensuring its adequate consideration, nor any compelling power behind it to get its recommendation adopted.

The same thing largely applies to a circular letter that has just been sent out by the Local Government Board recommending the adoption by local councils for local government officials of the war bonus scheme that is now in operation for civil servants. Though the adoption of this recommendation would go some way to correct the gross inequality and unfairness of the arrangements as to war bonus that have been locally made, and though its justness and propriety is vouched for by the President of the Local Government Board, it is only in some instances that a free admission of these facts is to be anticipated. In many others they will be combated, and if the officials sit still and wait, rather than make themselves critical and objectionable to the committees, they will get nothing, or at best have the question of war bonus and long overdue increase of salary mixed up, with a view to advantage being taken of the occasion to grant the least possible advance to the official.

In fact, this settlement of official salaries, and of increasing salaries and payment for extra and special services, will continue to be matter of injustice and dissatisfaction so long as the power remains one-sided, as it now is, the local council or committee being able to give or to withhold according as caprice or prejudice may dictate. In such case the advantage will go to the sycophant, and to him who has carefully avoided any action in the course of his duties that would tell against the interest of members of the committee, rather than to the person of independence. The official up to the present time has had no appeal against the decision of the local body. All that one has been able hitherto to get from the Local Government Board has been a statement to the effect that they will readily give their required sanction to any proposition of the local council to increase the salary when they receive such a proposition, and that is all.

The position plainly points to the necessity for the provision of some independent means of determining and regularizing all salaries, and powers to this end ought certainly to be embodied in the first Act of Parliament that proposes to regulate the public medical services, because the feeling of injustice occasioned in the minds of medical officials, and the destruction of goodwill and public spirit occasioned thereby, has its consequence in great damage and prejudice to public work.—I am, etc.,

J. H. GARRETT.

Cheltenham, Dec. 21st, 1918.

FILARIASIS AMONG AUSTRALIAN TROOPS.

SIR,—In the BRITISH MEDICAL JOURNAL of October 12th, 1918, p. 405, there is an article by Captain Rimmer, R.A.M.C., describing four cases of filariasis amongst Australian troops. As these four men came from southern Queensland this is not surprising to those acquainted with the conditions there. In 1909 and 1910 four thousand cases, Europeans, admitted to the Brisbane Hospital for all conditions, were examined for filaria. They were examined at the rate of 200 consecutive admissions at a time with short intervals between each series. The final result showed 11.5 per cent. of filariasis in the 4,000. A similar examination of 112 children under 12 years of age, all inmates of the Children's Hospital at the same time for various conditions, showed 5 per cent. of filariasis. Practically none of these patients showed symptoms of filariasis nor did they appear to suffer any inconvenience from the parasite in the blood. They were not aware of the condition, and it could not have been discovered except by routine examination.

The above facts indicate that about 10 per cent. of the population of southern Queensland have filaria in the blood. Symptoms of the affection are, however, comparatively rare. Cases of filarial lymphangitis, chyluria, and filarial adenitis are occasionally seen. Cases of hydrocele, lymphocele, and deep intramuscular abscess of obscure origin are notably prevalent, but filaria can rarely be found in the blood in these cases. Elephantiasis is unknown.

Captain Rimmer is to be congratulated on calling attention to these cases, as it is probable that a large percentage of Queensland troops are infected, and when symptoms develop the cause would possibly be overlooked by those not acquainted with the conditions in Queensland. In two of Captain Rimmer's cases the men were able to give the information that they had suffered from filaria, but the majority would not be able to do this.

Various methods of treatment have been tried in Queensland to abolish the parasite from the blood, but none have as yet been proved to be of definite value. It is found that the parasite disappears from the blood in about four years if the case is not reinfected. The most successful prophylactic treatment is the systematic use of mosquito nets.—I am, etc.,

D. G. CROLL, Colonel A.A.M.C.

Obituary.

LEONARD GEORGE GUTHRIE, M.D.OXON., F.R.C.P.,

Senior Physician Paddington Green Children's Hospital and Hospital for Paralysis and Epilepsy, Maida Vale.

BY the death of Dr. Leonard Guthrie, which took place on December 24th, a few hours after he had met with a severe accident, the medical profession has sustained a grievous loss.

Leonard George Guthrie, the second son of the late Mr. Thomas Anstey Guthrie, was born in Kensington on February 7th, 1858, and passed the early years of his preliminary education at King's College School. He then went up to Oxford, where he entered Magdalen College. Here he devoted himself to the study of classics, thus laying the sure foundation for those intellectual attainments for which he was so well known. He graduated in arts in 1880, and then became a student of St. Bartholomew's Hospital, having decided to adopt the profession of medicine. While engaged in the study of medicine he gave early promise of that independence of mind which was his chief characteristic throughout life. In 1888 he took the degree of M.B., B.Ch. at Oxford, and in 1893 proceeded to the degree of M.D. Previous to this, however, he had obtained the diplomas of the College of Surgeons and of the Society of Apothecaries. His first appointment was that of house-surgeon to the Paddington Green Children's Hospital, and this event directed his attention to the study of disease in early life, a subject with which he was closely connected for the whole of his professional career. In due course he was elected to the staff of the hospital, and at the time of his death was its senior physician. At about the same time Guthrie joined the staff of the Hospital for Epilepsy and Paralysis, Maida Vale, and with this institution also he was actively connected up to the end.

Guthrie's close association with hospitals devoted to neurology and diseases of children afforded him ample opportunities for the study of these conditions, and of them he availed himself to the fullest extent. His pen was constantly employed, and he published much valuable work, distinguished by deep knowledge, sound reasoning, and an excellent literary style. Among the more important of his contributions may be mentioned *Interstitial Nephritis in Childhood*, 1897, *Functional Nervous Disorders in Childhood*, 1907, the Harveian Lecture in 1910 on hydrocephalus, articles on night terrors in *Allbutt's*

System of Medicine, and on cyclic albuminuria, aphasia, apoplexy, hemiplegia, and enuresis in the *Index of Treatment* in 1907, as well as many papers dealing with the same subjects which appeared in the *Transactions* of the medical and clinical societies.

Guthrie had always been an enthusiastic student of the history of medicine, and when in 1907 he was appointed FitzPatrick Lecturer at the Royal College of Physicians of London—he had been elected a Fellow in 1900—he chose as his subjects "Contributions to the study of precocity in children" and the "History of neurology." The design of these lectures gave his wide culture full scope, and his treatment of the subject was justly appreciated by those who were acquainted with them. Unfortunately the lectures were never published in book form, but this omission, it is hoped, will now be rectified. He was also the author of a charming work entitled *Hospital Sketches*, by "Galen," in which humour and pathos were happily blended.

During the later years of his life Guthrie was much occupied in public work in connexion with the medical profession. On him, as secretary to the committee appointed by the College of Physicians for the revision of the *Nomenclature of Diseases*, fell the heavy work associated with that task. But he was eminently qualified for the duty, which required not only wide medical knowledge, but also a classical training, and he acquitted himself in a manner highly satisfactory to all. When the war broke out his services were freely and unostentatiously given to the great cause. Besides his attendance upon neurological cases, he was one of those selected to examine medical men under the Ministry of National Service, and later he became a member of the Board of Medical Assessors for the final examination of those who appealed from their grading. He was an active member of the Council of the Royal Medical Benevolent Fund, and this year was elected a member of the Council of the College of Physicians. Quite recently he had been appointed an examiner in Medicine at Oxford.

The foregoing account will serve to show the great professional activities of Leonard Guthrie. But the personal element must now be considered, and that is a subject upon which it is good to dwell. For Leonard Guthrie was possessed of qualities of mind and character that endeared him to all with whom he came in contact, and his loss will be mourned to-day by a large number of people. He was ever ready to sacrifice himself in the service of others, and many will remember his unfailing kindness in all cases where he could be of service, and his modesty in denying that he had done anything beyond his common duty. In all the public and private relations in which he stood to society in general, consideration for others, and a fine sense of duty were his invariable rules. Nor must it be supposed that he won his high character by yielding to the views and opinions of others, for he was most tenacious of opinions he deemed to be just, and no inducement, however cunningly devised, could cause him to swerve a hair's breadth from the path he believed to be right. He had a lofty conception of the position of a physician, and throughout his busy life there was no occasion on which he allowed private advantage to come between him and the high ideals to which he aspired.

A tribute must also be paid to the qualities of his mind. In the best sense of the term, Guthrie was an example of the cultured physician. Though learned in a high degree, that learning was never acquired for the purpose of parade, but simply because he worshipped it for its own sake. If he loved rather the quiet of the mediaeval cloisters, he was not wanting in his appreciation of the more virile attainments of succeeding ages. With many of the questions debated at the present time he had no sympathy, but if he expressed his disapprobation, it was untinged with rancour, and left no sting. His attitude to the world and its ways permitted him to stand aside and be amused where others would have preferred to rush in and take part in the fray. He was an accomplished writer, and his style had considerable literary merit, but he was a stern critic of his own work, and on this account he was apt to undervalue his effort after it was accomplished. His loss will be severely felt, for, in a way, Leonard Guthrie occupied a unique place in the profession. We shall miss sorely his genial friendship, his well stored mind, and his keen sense of humour, which made all men the better who could claim his companionship.

The funeral took place at Kensal Green Cemetery on Saturday, December 28th, 1918, and was attended by many friends and representatives of the various bodies with which Dr. Guthrie was connected, such as the Royal College of Physicians, the Paddington Green Children's Hospital, and the Hospital for Epilepsy and Paralysis at Maida Vale.

Professor Sir WILLIAM OSLER writes: Leonard Guthrie's death will be a personal loss to many of us. Beneath the carapace of convention his friends knew a warm-hearted, loving man, with cultured tastes, and a keen interest in many aspects of his profession. It was also a special pleasure to meet him at the Children's Clinical Club, or the sections of the Royal Society of Medicine. The history of medicine formed a bond of sympathy between us, and in the organization of the section in this subject at the Royal Society of Medicine his co-operation was invaluable. Oxford and his old college Magdalen had given him a certain mental fastidiousness, which limited his literary output, but what he wrote was always of a high quality. His untimely death is sad loss and a real sorrow.

His colleague, Dr. G. A. SUTHERLAND, writes: At the moment when the sense of loss caused by the sudden death of Dr. Leonard Guthrie is so recent one naturally thinks more about the man than the work he has accomplished. No better place could be found for observing his many-sidedness than the Paddington Green Children's Hospital, with which he had over thirty years' official connexion. While many have enjoyed reading his luminous writings on the psychology of childhood it was even more valuable to see him at work with his patients. A bond of sympathy and understanding was soon established, and under its influence the child unfolded and yielded up those secrets which others had failed to obtain. His advice and help were always at the service of his colleagues, and his suggestions were given with his characteristic diffidence. Although of an extremely sensitive nature, he could not be moved to anger by anything which reflected on himself alone, but if the reflection were on the hospital or a member of the staff his righteous indignation was aroused, and he would spare no effort to right the wrong. When the peaceful waters of hospital life became troubled, Dr. Guthrie was always the one called in by common consent to restore the peace. He loved young people and old things. One might safely and freely criticize Dr. Guthrie's opinions, medical or otherwise, but to pass an adverse opinion on Oxford University or the Royal College of Physicians before him was to enter on dangerous ground. His papers on professional subjects were not published until he had carefully looked up the medical references to the subject for the previous few centuries and given due credit to earlier writers. He was a great medical society man, and although for many years a listener only, as the years passed he took a more and more active part in the discussions. Many a dull evening at a medical society has been suddenly changed to brightness when Dr. Guthrie took the floor and delighted his audience with his telling phrases and illuminating thoughts. The charm and brilliancy of his writings have appealed to many, but perhaps those features were more striking in his conversation when he was with intimate friends. Those who knew him well were astonished at the multiplicity of his interests, each of which had a share in the development of his mind and character. He was always learning and always developing, and the possibilities of his future seemed even greater than the records of his past, when the end came.

ROBERT ALEXANDER LUNDIE, M.A., B.Sc., M.B., C.M.EDIN., EDINBURGH.

DR. ROBERT ALEXANDER LUNDIE, whose death, following an accident in the streets of Edinburgh, occurred on December 18th, was a man of brilliant attainments not limited to the field of medicine. He was born at Birkenhead on May 13th, 1855, and was the elder son of the Rev. Dr. Lundie, an eminent minister of the English Presbyterian Church and a distinguished citizen of Liverpool. His mother, who is still alive at the advanced age of 91, was a daughter (one of twenty-two children) of Mr. Charles Cowan of Westerlea.

Robert Lundie began his student career in Edinburgh in

1871, and for the ten years he spent there it ought, perhaps, to be recorded that he supported himself all the time. He took a prominent place in all his classes and graduated M.A. with first class honours in mathematics in 1875. He then proceeded to science, where he did equally well, gaining medals in chemistry and botany and winning the Falconer Fellowship in geology. After taking the B.Sc. in 1877, he spent a year as a student in New College (Free Church of Scotland) and numbered amongst his friends there the late Professor Henry Drummond and Sir George Adam Smith; but he did not proceed further with Divinity and turned to medicine, graduating M.B., C.M. in 1880. Dr. Lundie acted as house-physician to Dr. Brackenridge and as house surgeon to Professor Chiene in the Edinburgh Royal Infirmary in the months following his graduation, and he settled in private practice in that city in 1881, although his career was at this time threatened by a serious attack of typhoid fever, which led him to make two voyages to the Cape. In 1884 he married and went to live in Grange Road, where he continued all the rest of his life. In the same year (1884) he obtained the Fellowship of the Royal College of Surgeons of Edinburgh. He devoted himself specially to ophthalmology and acted some years as private assistant to Dr. Argyll Robertson; but he did not pursue that subject as a specialty, preferring to act as a general practitioner, although he would undoubtedly have made a mark as a specialist on the eye. He kept himself remarkably up to date in respect of all advances in medicine. Thus he independently discovered that thyroid extract given by the mouth was as efficacious as if administered by injection, and he successfully operated on a ruptured gastric ulcer in 1894 (*Trans. Edin. Med.-Chir. Soc.*, vol. xiv, p. 57, 1894–5). Dr. Lundie acted for twenty-two years as assistant medical officer to the Longmore Hospital for Incurables. He wrote many of the medical articles for *Chambers's Encyclopaedia* and for the Temple *Dictionary of the Bible;* and his special knowledge of the natural sciences was revealed in two papers read before the Edinburgh Royal Society, one upon the passage of water and other liquids through india-rubber (1897) and the other (with Dr. Knott) on the interesting phenomenon known as dew-bows (1898).

He acted for several years as Treasurer and had been President of the Edinburgh Branch of the British Medical Association, and was one of the representatives of the Edinburgh and Leith Division on the Representative Body.

Since the beginning of the war Dr. Lundie, like so many of his professional brethren, had been overworked, for he freely offered himself to take duty for men who were away on military service, held various posts connected with the war and just two months before his own death he had the grief of losing his only son (captain, acting major, in the Royal Engineers), who was shot by a sniper.

Dr. Lundie was a delightful companion, for out of a remarkably full mind he could bring forth treasures new and old, and a talk with him was always thought-provoking and inspiring; whilst in his purely professional work his thoroughness and his devotion were almost a proverb among his brethren. He combined in a very remarkable way a wide general knowledge with a painstaking and brilliantly complete acquaintance with distinctively medical and surgical matters; and he was always ready to give of his best experience to the younger men who were devoting themselves to special research and inquiry.

GEORGE GRAYSON STOPFORD STOPFORD-TAYLOR,

M.D. DURHAM, M.R.C.S.,

Honorary Physician to the Liverpool Skin Hospital.

WE regret to have to announce the death of Dr. Stopford-Taylor, which took place on December 1st. A victim to influenza, he courageously continued his professional duties almost to the last, when fatal pneumonia supervened. In the loss of Dr. Stopford-Taylor, Liverpool and district has lost the doyen of dermatologists. His clinical experience was unrivalled, as he was the oldest exponent of the specialty in the city. A Liverpool man, son of the late Dr. Stopford Taylor, medical officer of health of Liverpool, Dr. George Stopford-Taylor qualified in 1874 from the Liverpool School of Medicine. He went into general practice, where he succeeded by his indomitable perseverance and his personal characteristics in building up a lucrative practice. At the same time he seized the opportunity through being attached to the Liverpool Hospital for Cancer and Skin Diseases of laying that foundation of his knowledge of dermatology to which ultimately he devoted his whole energies from 1890 onwards. Severing his connexion with the Cancer Hospital, Dr. Stopford-Taylor, with Dr. R. W. MacKenna and the late Dr. William Carter, founded the Liverpool Skin Hospital. Here he found full scope for his ideas, and had the satisfaction of realizing them to the utmost.

Dr. Stopford-Taylor published during his career many papers on skin diseases, especially in connexion with newer methods of treatment which he was among the first to put into use. As a clinician Dr. Stopford-Taylor was unrivalled, and by reason of his experience of general practice there was no danger on his part of looking at a skin disease with the eye of the specialist only. Pictorial display appealed to him, and great was his satisfaction when he could show the living counterpart of a painting of a rare skin affection. He often showed skin cases at the clinical evenings of the Liverpool Medical Institution, and latterly many wax models.

As a medical man Dr. Stopford-Taylor inspired confidence in his patients, and earned the respect of his professional brethren. A memorial service was held at the Church for the Blind on Thursday, December 5th, and many friends, patients, and representatives of institutions with which the deceased was connected were present to pay their last respect and testify to the esteem in which he was held. Dr. Stopford-Taylor was twice married; by his first wife he had three sons—Major John Stopford-Taylor, Major Richard Stopford-Taylor, R.A.M.C., and Mr. Herbert Stopford Taylor, and one daughter, Mrs. Edward Atherton. These and other immediate relatives were present at the memorial service. He leaves a widow behind, and a pleasant memory of a well-spent life, full of usefulness to all with whom he was brought into contact.

DR. JOHN Z. TRUTER, who died at the Abbey Hospital, Woburn, on December 15th, 1918, was born in South Africa, and after studying medicine in the University of Edinburgh obtained the M.B., Ch.B. degrees in 1913. He then came to London, and held resident posts at St. Peter's Hospital and the Chelsea Hospital for Women, where he showed exceptional ability. He applied himself to genito-urinary surgery and gynaecology with such success that at the end of his time many of his chiefs were glad to avail themselves of his opinion and assistance in difficult cases. In 1914 he was in France at a Red Cross hospital, and during the past two years he was attached to the Duchess of Bedford's Woburn Military Hospital. On the clinical side he showed admirable judgement and accuracy of diagnosis, while his surgical work was marked by unusual technical dexterity, coolness, and precision. Mr. J. W. Thomson Walker writes: "Truter's early death will come as a shock to his many friends. Big, strong, handsome, courageous, open-hearted, and generous, a keen and able worker, and a favourite with every one, a wide field lay open before him, and success seemed assured. I hoped great things for Truter in the field of practical surgery. He was by far the ablest house-surgeon I have had, and his personality the most attractive. Nothing came amiss to him, and everything was worth doing and well done. His work was so thorough and even, and his judgement so balanced that he ranged, seemingly without effort, alongside those of us older and more experienced than himself. It was Truter's intention, I believe, to return to South Africa to practise surgery, and he had prepared himself carefully in all the branches of surgery to this end. His passing must undoubtedly be a loss to the South African profession, as it is to all of us who came in contact with him here."

THE Société Médicale des Hôpitaux de Paris at a recent meeting elected Sir Thomas Barlow, Sir Bertrand Dawson, Sir William Leishman, Sir Dyce Duckworth, and Sir Almroth Wright honorary members. The same distinction was conferred on Dr. Simon Flexner of the Rockefeller Institute for Medical Research, and several other American physicians.

Universities and Colleges.

UNIVERSITY OF DUBLIN.

TRINITY COLLEGE.

THE following candidates have been approved at the examinations indicated:

FINAL M.B.—*Part I. Materia Medica and Therapeutics, Jurisprudence and Hygiene, Pathology:* L. Abrahamson R. Dorm-r, S. L Feldman, W. B. J Pemberton, M. Nurock, J. M. B. de Wet, W. de V. Scholtz, J. P. de Villiers, Doris L. Graham, J. B. Maguire, Elsie A. Burns. *Materia Medica and Therapeutics, Jurisprudence and Hygiene Only:* P. I. Levitt. *Pathology (in Completion):* G FitzM Keatinge, S. R. Hill.

FINAL M.B., B.CH., B.A.O.—*Part II. Medicine:* W. P. Elford, T. Mulock Bentley, R. B. N. Smartt, H. S. Collins, W. A. Shannon, B. FitzJ. Haythornthwaite, C. J. Quinlan, J E. Jameson, F. J. Dyncoke, Ethel M. Luce, J. T. Mynhardt. *Surgery:* J. H. Coolican, W. P. Elford, W. Sweetman, L J. P. Murphy, W. A. Shannon, A. J. Vorster, E. R. Tivy, K. MacG. Greer. Ethel M. Luce, E. J. Lyndon. *Midwifery:* V. M. Synge, H. B. Van der Merwe, Gertrude Rice, J. C. J. Callanan. A. L. Wilson, J. T. Mynhardt, A. H. Thompson, L. J. P. Murphy, W. J. Hogan, R. W. Shaw, W. A. Byrn J. S. Quin, G. FitzM. Keatinge, S. J. Laverty, T. J. R Warren, C. J. Quinlan.

D.P.H.—*Part I. Bacteriology, Pathology, Chemistry, Physics, and Meteorology:* J. Speares, A. H. B. Pearce, J. W. Bigger, H. S. Sugars. *Part II. Sanitary Engineering, Vital Statistics and Public Health, Hygiene and Epidemiology:* J. W. Bigger, E. O. Bowie, J. Beckett, A. K. Cosgrave, A H. B. Pearce.

UNIVERSITY OF EDINBURGH.

THE following degrees were conferred on December 18th, 1918:

M.D.—A. G Brydon, T. Crisp, C. E. Dukes, T. A. MacGibbon, J. R. Stott, W. A. Young.

M.B., B.CH.—R. F. Boltman, H. C Brayshaw, E. B. Brown, D. H. Cameron, E. Chonglop, A. Chen Yu Chow, J. M'M. Colf, K. C. Crosbie, H. N. Daniel, C. G. L. van Dyk, W. Y. Eccott, E. C. Fahmy, E. F. Gordon, N. D. P de V. Graaff, G. H. Gunn, G. J. Hughes, L. W. Innes, N. W. Johnston, E. G. Joseph, T. W. Lowden, Anne L. MacDonald, A. L. M'Ilwaine (with second class honours), J. K. Mitchell, C. Nicholson, I. Platzky, J. J. Wessels.

UNIVERSITY OF ST. ANDREWS.

THE following candidates have been approved at the examinations indicated:

THIRD M.B., CH.B.—*Materia Medica:* Christin E. Little, M. M. Stewart. *Pathology:* C. B. Dyson.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examination indicated:

PRIMARY FELLOWSHIP EXAMINATION.—H. V. Exner, J. F. Sheppard, A. J. Snyman.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

FINAL EXAMINATION.—S. H. Berwitz, M. Bradley, T. F. Broderick, J. J. Coman, D. L. Crowe, L. M. Leventon, P. J. McGing, T. H. K. MacLaughlin. H. L. Mooney, R. H. Newman, M. F. O'Brien, V. R. O'Connor, Helen G. Rea, J. C. Rowan.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—*†T. A. Jordan, *†J. E. Nicole, *S. H. Robinson, †G. E. Spero, *C. de B. Thomson.
MEDICINE.—†T. A. Jordan, †F. W. Kemp, †J. E. Nicole.
FORENSIC MEDICINE.—W. S. Hughes, J. Kershaw, S. Robinson.
MIDWIFERY.—J. Kershaw.

* Section I. † Section II.

The diploma of the society has been granted to Messrs. T. A. Jordan, J. E. Nicole, and S. Robinson.

The Services.

RELEASE OF TERRITORIAL OFFICERS.

THE Army Council has issued an Army Order applying provisions, similar to those already made for the release from the colours of men of the Territorial Force, to officers of the same force; and providing for the gradual disembodiment of such Territorial officers as the exigencies of the service permit. Officers so disembodied will be liable, at any time before the general demobilization of the Territorial Force, to be re-embodied, either individually or collectively, in case of urgent military necessity. As this power will not be exercised except in the event of military emergency it will not interfere with the resettlement of officers in civilian life, nor is it intended to interfere with their emigration or repatriation overseas. Officers disembodied in accordance with this Army Order must notify permanent changes of address to the Military Secretary, War Office. The order does not make specific reference to Territorial medical officers.

Medical News.

DR. H. E. BOWER, of Stretton, near Warrington, has been appointed a commissioner of the peace for the county of Chester.

AT the meeting of the Röntgen Society on Tuesday next at 8.15 p.m., at the Royal Society of Arts, Dr. H. S. Allen will read a paper on electrical changes produced by light.

A COURSE in hospital administration for the diploma in public health will be given at the Western Hospital, Fulham, by the medical superintendent, Dr. R. M. Bruce, beginning on January 7th. Further particulars can be obtained from the clerk to the Metropolitan Asylums Board.

THE next meeting of the Research Committee of the American Red Cross in France will be held in Paris on January 10th and 11th. There will be a conference on surgery at the base on January 10th, and on the following day discussions on administrative work at the base and medical problems of entrainment and embarkation.

COLONEL J. G. ADAMI, M.D., F.R.S., A.D.M.S., Canadian Army Medical Corps, will open a discussion on the prevention and arrest of venereal disease in the army at a meeting of the Royal Institute of Public Health (37, Russell Square) on Wednesday next, at 4 p.m. Lord Sydenham will be in the chair, and among those who will take part in the discussion are Dr. Mary Scharlieb, several medical officers of the United States Army, and Lieut.-Colonel L. W. Harrison, D.S.O., R.A.M.C.

SIR ROBERT ARMSTRONG-JONES will give his next course of Gresham Lectures on Physic at Gresham College, Basinghall Street, E.C., on January 14th, 15th, 16th, and 17th at 6 p.m. on each day. The first lecture will deal with heredity, the second with alcohol, the third with venereal diseases, and the fourth with the recent epidemic of influenza and measures taken to combat its spread.

BURBERRY'S (Haymarket, London, S.W.1) are holding a sale during January and February of weatherproof topcoats, suits, and gowns, which will be sold at specially low prices, comparable to those before the war. They also intend to sell a number of service weatherproofs and other articles of naval and military equipment.

THE Medical Officers of Schools Association, being desirous of compiling a register of medical men and women whose professional services are in any way employed in connexion with the hygienic care of schools or colleges, asks such members of the profession to send particulars to Dr. G. Chaikin, honorary secretary, 11, Chandos Street, W.1.

THE Abdulla Cigarette Company (173, New Bond Street, London) has again prepared a wall almanac and has offered 20,000 for sale for the benefit of the British Red Cross Society at the price of 1s. 4d. a copy, out of which 1s. will be paid to the fund of the society. The almanac is again well illustrated by pictures, some in black and white and others in colours, for every month in the year, and has a frontispiece in colours by Mr. Charles E. Brock, R.I.

A SOCIETY of orthopaedic surgery has recently been formed in France. M. Kirmisson, professor of clinical surgery and diseases of children in the University of Paris, is the president, and MM. Auguste Broca, professor of operative surgery in the Paris faculty, and Dénucé, associate professor in the University of Bordeaux, are vice-presidents. The secretary-general is M. Nové-Josserand, associate professor in the Lyons faculty. The first annual meeting will be held in Paris in October, 1919, at the same time as the French Congress of Surgery. The subjects proposed for discussion are amputations in relation to subsequent prostheses, spondylitis in the war, and the treatment of false joints.

ACUTE poliomyelitis was made notifiable in 1912, and polio-encephalitis was included in the county of London. The Local Government Board has now made an order making not only polio-encephalitis everywhere notifiable, but also acute lethargic encephalitis, the obscure disease which occurred on a small scale in epidemic form in the spring of 1918. The illness, it is noted, presented the characters of an acute general disease associated with progressive languor, apathy, and drowsiness passing into lethargy, muscular weakness passing into complete disablement, and various paralyses of muscles chiefly of the eyes and face.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London;* telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London;* telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Mediocra, Westrand, London;* telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

QUERIES AND ANSWERS.

SEVERE VOMITING PRODUCED BY CAFFEIN CITRATE.

DR. R. T. WILLIAMSON (Manchester) writes: Can any reader tell us why caffein citrate occasionally produces very severe vomiting? I have used this drug very frequently, and usually no unpleasant symptoms have been produced, but occasionally it appears to cause most severe vomiting.

LETTERS, NOTES, ETC.

THE TREATMENT OF SOME COMMON FEMALE AILMENTS.

Erratum.

IN Dr. Frederick McCann's address under the above heading, which was published in the last issue of the JOURNAL, the word "dil." was, through inadvertence, omitted after "Acidi sulphurici" in the prescription for an ergot mixture printed at p. 706. The prescription should read as follows:

℞ Ext. ergotae liq.	...	...	...	♏ xx–xxx
Acidi sulphurici dil.	...	...	...	♏ x
Magnesii sulphatis	...	...	...	gr. xx
Aq. cinnamomi	...	...	...	℥j

T.i.d.

POTABLE SPIRITS.

DR. C. R. WILLANS (Bournemouth) writes: Could anything be done to arrange for a supply of whisky and brandy for the use of invalids? General practitioners are constantly being asked for certificates to obtain these commodities, and the trouble taken is of no avail because the dealers have none to sell. It is a great deprivation for old people to have to do without their stimulant. The restrictions which have been and still are in force have been very useful and one hopes that they will be continued, but it would seem to be a fairly simple matter to arrange for a certain amount to be released from bond and ear-marked for the special purposes of invalids and old people and to be obtained by medical certificate.

COLLOIDAL COPPER AND INTRAMINE IN CANCER.

DR. A. V. LECHE (Axbridge) writes: Working on the lines of reduction and oxidation, with its consequent inhibitory action on lowly organized tissues, as Mr. J. E. R. McDonagh has been demonstrating, I have been treating a few cases of cancer with colloid suspensions. Though my experience is small, I have not had the success others have had with colloidal copper alone. I then tried it with intramine, and in a case of cancer of the pharynx (aged 58) rapidly extending down to the oesophagus and larynx, found more encouragement. The patient was seen by the staffs of two hospitals in April, 1918, and given a month to live. I gave one injection of mixed intramine in the buttock, and a week later colloidal copper. The next week intramine and the week following colloidal copper, and so on. He improved for three months; he then said he was not so well, and I am now giving one weekly injection of intramine and then two weeks following colloidal manganese (mixed solution). On December 16th, 1918, he was better, swallowed better, spoke better, had weathered an acute attack of influenza, and walks one and a half miles each week to my house. So, after eight months' treatment, he is able to walk about, and has not died the awful death of slow starvation and asphyxia. It seems to me this treatment is most suitable for diffuse growths, as with large existing tumours colloidal copper seemed to have no appreciable effect.

A MEDICAL FRONT LINE CLUB.

A BATTALION M.O. writes: With reference to the suggestion by Colonel Donegan in the BRITISH MEDICAL JOURNAL of December 7th, 1918, for the formation of a club for medical officers, with the title of the "Front Line Club," I am sure the majority of medical officers serving with battalions will strongly deprecate any such proposal. To those of us who have lived in the line with combatant officers the idea of suggesting that a line of demarcation be drawn between M.O.'s in accordance with their relative positions to the enemy in the field is unfair and savours of egotism. Surely those of our profession who have served in casualty clearing stations and in base hospitals, and, knowing as they do, the devastating effects of bombs, have carried on night after night with their work under the very trying conditions of uncertainty occasioned by the irregular visitations of the night bombers—surely they are deserving of credit and not of exclusion. Each M.O. has had his work to do during these past four years of war, some under hard and dangerous conditions, others surrounded by many home comforts, but all to one great end, and the R.M.O., while having had none of the latter and a fair share of the former, will not wish to demonstrate that his service has been more meritorious than that of those who have not been fortunate enough to live with, and to know one's work appreciated by, the fighting man. Comparisons amongst combatants as to their positions in the forward area are invidious; amongst non-combatants, and especially amongst physicians and surgeons in the army, whose energies cover such a vast sphere of labour, such comparisons are ridiculous.

TO BRIGHTEN MEDICINE.

A CORRESPONDENT writes to protest against what he is pleased to call the deplorable dullness of the reports of medical and scientific societies which appear in the medical journals. By way of enlivening matters he proposes that a leaf be taken from the notebook of the political reporter, and he gives the following example to illustrate his meaning:

Dr. X. said that he wished to discuss the production of variation in the physiological activity of *Bacillus ignotus* by the use of Prussian blue. (Hear, hear.) *Bacillus ignotus* could be trained to grow in neutral broth containing Prussian blue. (Cheers.) By gradually increasing the percentage of the stain the organisms would develop readily. (Prolonged applause.) In most cases the organism at the same time underwent a profound change (sensation) in its physiological activity towards sugars (a laugh), and towards polyhydric alcohols. (Loud laughter.) Acid was only produced, he said, in certain of these from which the organism originally produced both acid and gas. (Interruption.) The power of gas formation was permanently lost. (Cries of dissent.) In one instance this change in physiological activity was accompanied by profound morphological and cultural changes. (Disturbance.) The resultant organism was quite different to that from which it had been produced. (Uproar.) The change brought about by Prussian blue indicated a connexion between the *magnificus* and *ignotus* groups and the possibility of development of organisms of the one into those of the other. (Here the meeting broke up in disorder.)

BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

AT a meeting of the Committee of the Belgian Doctors' and Pharmacists' Relief Fund, held on December 23rd, the honorary secretary, Dr. Squire Sprigge, reported that he had received a visit from Dr. Théo. Huyberechts, a member of the Belgian Doctors' and Pharmacists' Committee in Brussels, who expressed the gratitude of that committee to the Fund, testifying that such help had been "beyond words valuable."

As just sufficient money remained in hand it was decided to send to Belgium the full mensuality of £800 for next month.

The following subscriptions have been received:

	£	s.	d.
Dr. Alfred Cox (monthly)	1	1	0
Lieut.-Colonel Fremantle, R.A.M.C.	10	0	0
American Red Cross Commission for Belgium (monthly)	200	0	0
Dr. D. Douglas-Crawford	5	5	0

THE appointments of certifying factory surgeons at Rochdale (Lancs) and Shrewsbury (Shropshire) are vacant.

THE appointment of medical referee under the Workmen's Compensation Act, 1906, for the Alfreton, Buxton, Chapel-en-le-Frith, and New Mills, and Chesterfield County Courts in Circuit No. 19 is vacant. Applications to the Private Secretary, Home Office, by January 15th.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	0	6	0
Each additional line	0	0	9
Whole single column	4	0	0
Whole page	12	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.